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A Division of the Department of Natural Resources

Annual Report

for the Year

1962



G. A. FRANZ, JR.

Deputy Commissioner of Mines

Publication Approved by E. G. Spurlin, State Controller



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Letter Of Transmittal

May 1, 1963

Honorable John A. Love
Governor of Colorado
State Capitol
Denver

Dear Governor Love:

In compliance with the requirements of Chapter 92, Article 32, Section 11, of the Colorado Revised Statutes 1953, I have the honor to transmit herewith the Report of the State Bureau of Mines for the year 1962.

Respectfully submitted,
G. A. Franz, Jr.
Deputy Commissioner of Mines

Personnel

G. A. FRANZ, JR., Deputy Commissioner.....Lakewood
DAVID R. COLE, Senior Inspector.....Grand Junction
NORMAN R. BLAKE, Inspector, District No. 1....Black Hawk
JOSEPH L. KEATING, Inspector, Dist. No. 2....Colo. Springs
JOHN W. DOYLE, Inspector, District No. 3.....Leadville
ELZIE D. RAY, Inspector, District No. 4.....Montrose
JOHN H. PAKKA, Deputy Inspector.....Telluride
THOMAS D. HIGH, Junior Inspector.....Palisade
WILLIAM E. HORN, Junior Inspector.....Naturita
KEITH P. JOHNSON, Junior Inspector.....Ouray
CALVIN T. WARNICA, Junior Inspector.....Nucla
MARGARET G. LAWRENCE, Administrative Assistant Denver
THELMA L. MACMANUS, Senior Account Clerk.....Denver
NAOMI S. JONES, Clerk Stenographer.....Denver
OLIVIA C. REMINES, Intermediate Clerk Typist.....Aurora
CATHERINE C. CLARK, Intermediate Clerk Typist....Littleton
MARIE E. BARNES, Clerk Typist.....Uravan

Commissioners Of Mines

HARRY A. LEE.....	May 11, 1895 - May 10, 1903
E. L. WHITE.....	May 10, 1903 - May 10, 1907
T. J. DALZELL	May 10, 1907 - May 10, 1911
T. R. HENAHEN.....	May 10, 1911 - May 10, 1915
FRED CARROLL.....	May 10, 1915 - May 10, 1919
HORACE F. LUNT.....	June 1, 1919 - June 1, 1923
JOHN T. JOYCE.....	June 1, 1923 - June 12, 1939
EDWARD P. ARTHUR.....	June 12, 1939 - August 26, 1943
FRED JONES.....	September 27, 1943 - April 25, 1950
WALTER E. SCOTT, JR.....	May 3, 1950 - May 31, 1959

Directors Of Natural Resources

DR. EDWARD L. CLARK.....	October 15, 1959 - March 7, 1962
FELIX L. SPARKS.....	August 2, 1962

Deputy Commissioner Of Mines

G. A. FRANZ, JR.....	June 1, 1959
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Districts Of Inspection

DISTRICT NO. 1, all of the following counties: Adams, Arapahoe, Boulder, Cheyenne, Clear Creek, Denver, Douglas, Elbert, Gilpin, Grand, Jackson, Jefferson, Kit Carson, Larimer, Logan, Morgan, Phillips, Sedgwick, Washington, Weld, Yuma, and that part of Park County lying north of Fairplay.

DISTRICT No. 2, all of the following counties: Alamosa, Baca, Bent, Conejos, Costilla, Crowley, Custer, El Paso, Fremont, Huerfano, Kiowa, Las Animas, Lincoln, Otero, Prowers, Pueblo, Teller, and that part of Park County lying south of Fairplay.

DISTRICT NO. 3, all of the following counties: Chaffee, Eagle, Garfield, Lake, Mineral, Moffat, Pitkin, Rio Blanco, Rio Grande, Routt, Summit, and that part of Gunnison County in the extreme northwest corner and lying north of the 39th degree of latitude, and that part of Saguache County lying south and east of the Continental Divide.

DISTRICT NO. 4, all of the following counties: Archuleta, Delta, Dolores, Hinsdale, La Plata, Mesa, Montezuma, Montrose, Ouray, San Juan, San Miguel, and Gunnison County, except the extreme northwest corner lying north of the 39th degree of latitude, and that part of Saguache County lying north and west of the Continental Divide.

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Publications Of The Bureau Of Mines

BULLETINS

- Bulletin No. 1, Recommendations for Safety Appliance in Mining, Harry A. Lee, Commissioner of Mines, 1896.
- Bulletin No. 2, Precious Metal Production for the Year 1898, Harry A. Lee, Commissioner of Mines, 1899.
- Bulletin No. 3, Mining Laws, Relative to Bureau of Mines Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1899.
- Bulletin No. 4, Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1901.
- Bulletin No. 5, Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1902.
- Bulletin No. 6, Regulations Relative to the Construction, Equipment and Operation of Metalliferous Mines, Mills and Metallurgical Plants, Recommendations and Mineral Production for 1905, E. L. White, Commissioner of Mines, 1906.
- Bulletin No. 7, Federal and State Laws Relating to Mining, Fred Carroll, Commissioner of Mines, 1916.
- Supplement to Bulletin No. 7, Mining Laws Enacted by the Twenty-First General Assembly, Fred Carroll, Commissioner of Mines, 1917.
- Supplement No. 2 to Bulletin No. 7, Amendments to the Mining Laws Enacted by the Twenty-Second General Assembly, Horace F. Lunt, Commissioner of Mines, 1919.
- Supplement No. 3 to Bulletin No. 7, Amendments to Laws Relating to Mining Enacted by the Twenty-Third General Assembly, Horace F. Lunt, Commissioner of Mines, 1921.
- Supplement No. 4 to Bulletin No. 7, Amendments to Laws Relating to Mining Enacted by the Twenty-Fourth General Assembly, Horace F. Lunt, Commissioner of Mines, 1923.
- Bulletin No. 8, The Oil Shales of Northwestern Colorado, Horace F. Lunt, Commissioner of Mines, 1919.
- Bulletin No. 9, Mine Safety Standards, Horace F. Lunt, Commissioner of Mines, 1920.
- Bulletin No. 11, Federal and State Laws Relating to Mining, John T. Joyce, Commissioner of Mines, 1931.
- Bulletin No. 12, Mining Laws of Colorado, Edward P. Arthur, Commissioner of Mines, 1942.

- Bulletin No. 13, Mining Laws of Colorado, Fred Jones, Commissioner of Mines, 1946.
- Bulletin No. 14, Mining Laws of Colorado, Fred Jones, Commissioner of Mines, 1949.
- Bulletin No. 15, Oil Well Safety Laws, Walter E. Scott, Jr., Commissioner of Mines, 1953.
- Circular No. 1, Location of Lode and Placer Mining Claims, Walter E. Scott, Jr., Commissioner of Mines, 1953.
- Bulletin No. 16, Colorado Mining Laws with Rules and Regulations, Walter E. Scott, Jr., Commissioner of Mines, 1954.
- Circular No. 1, Revised, Location of Lode and Placer Mining Claims, Walter E. Scott, Jr., Commissioner of Mines, 1957.
- Bulletin No. 17, Safety Rules and Regulations (Condensed), G. A. Franz, Jr., Deputy Commissioner of Mines, 1959.
- Circular No. 2, Minerals of Colorado and Area Locations, G. A. Franz, Jr., Deputy Commissioner of Mines, 1960.
- Bulletin No. 18, Oil Well Safety Laws, G. A. Franz, Jr., Deputy Commissioner of Mines, 1961.
- Circular No. 3, Location Regulations for Lode and Placer Mining Claims, Tunnel Sites and Mill Sites, G. A. Franz, Jr., Deputy Commissioner of Mines, 1961.
- Bulletin No. 19, Colorado Mining Laws with Safety Rules and Regulations, G. A. Franz, Jr., Deputy Commissioner of Mines, 1962.

REPORTS

- Report of Bureau of Mines, Colorado, from its Establishment in May, 1895, to November 30, 1896, Harry A. Lee, Commissioner of Mines.
- Annual Reports for 1897-1898, Harry A. Lee, Commissioner of Mines.
- Biennial Reports for 1899-1902, Harry A. Lee, Commissioner of Mines.
- Biennial Reports for 1903-1906, E. L. White, Commissioner of Mines.
- Biennial Reports for 1907-1910, T. J. Dalzell, Commissioner of Mines.
- Biennial Reports for 1911-1914, T. R. Henahan, Commissioner of Mines.

Biennial Reports for 1915-1918, Fred Carroll, Commissioner of Mines.

Annual Reports for 1919-1922, Horace F. Lunt, Commissioner of Mines.

Annual Reports for 1923-1924, John T. Joyce, Commissioner of Mines.

Annual Report for 1925 was fully prepared but, because of lack of funds, was not printed. The manuscript is on file in the office of the State Bureau of Mines.

Annual Reports for 1926-1935, John T. Joyce, Commissioner of Mines.

Owing to lack of funds the Annual Report for 1936 was not published.

Annual Report for 1937, John T. Joyce, Commissioner of Mines.

Owing to lack of funds the Annual Report for 1938 was not published.

Annual Report for 1939, Edward P. Arthur, Commissioner of Mines.

Owing to lack of funds the Annual Report for 1940 was not published.

Annual Report for 1941, Edward P. Arthur, Commissioner of Mines.

Annual Reports for 1942 and 1943, Fred Jones, Commissioner of Mines.

Lists of Mines for 1944 and 1945, Fred Jones, Commissioner of Mines.

Annual Reports for 1946-1947, Fred Jones, Commissioner of Mines.

Annual Report for 1948 was not published.

Annual Reports for 1949-1958, Walter E. Scott, Jr., Commissioner of Mines.

Annual Reports for 1959-1962, G. A. Franz, Jr., Deputy Commissioner of Mines.

At the time this report goes to press, copies of the following reports are available: 1897, 1919, 1921, 1922, 1928, 1929, 1932, 1939, 1941, 1946, 1947, 1950-51, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961. All other reports are out of print, but they may be consulted in our Denver office and at most public libraries.

Forward

With the passing of 1962 a very definite change has been evident in the type of minerals produced in Colorado. The high cost of supplies and materials used in mining operations, along with exceedingly high labor cost, is not being offset by the prices received for our precious and base metals. In 1962 a silver price of \$1.22 per ounce was attained which was the highest price received in forty-two years and this incentive had little or no effect on the amount of silver produced in the State during the year. Although not adequate to cover increased mining costs, the prices received for lead, zinc, copper and gold are considerably higher than they were in the boom days of base and precious metals. Despite these increased prices, the production of these minerals has steadily declined. Another factor which has a tremendous effect on production of these minerals is the fact that since 1960 we have not had a smelter or final treatment plant in the State and all ores and concentrates, by necessity, are shipped to other states for processing. This of course again increased the cost of delivering ores to their ultimate destination and added to the cost of mining.

With this very depressing picture of the precious and base metal industry in Colorado and other western states, we are still able to report an increase of over three hundred million dollars per year in Colorado mineral production over the year 1900. We can report an overall price increase in base and precious metals which, with decreased production of the metal content, makes the dollar value of these minerals produced almost equal to the dollar value in 1900. Other metallics, industrial minerals and mineral fuel, considered of little value in 1900, now have a predominate place in the State's mineral industry. These minerals, such as molybdenum, uranium, vanadium, sand and gravel, limestone, shale, petroleum, gas, stone, volcanic scoria and many others, now constitute over 90% of our mineral production. Equally as many other minerals found in Colorado are waiting to be developed.

Colorado has untapped riches and opportunity lying idle in our oil shale reserves. Our limestone, shale, gypsum, beryl, feldspar, rare earth, scoria, quartz, sulphur and many other minerals have not been even partially developed to their ultimate capacity. We realize full well that an operator, having his equipment and capital tied up in base and precious metal property, cannot easily shift into this new field of opportunity, and in many cases the desire to change over has been dimmed by his past sad experiences in base and precious metals. It is certainly desired that these minerals will someday command prices that will enable our Colorado operators to resume operations. However, in the meantime conditions will not be improved by passing up the production of minerals that can be

mined for a profit, a profit which rightfully belongs to one who had a major part in developing Colorado's past mineral industry. In other words, we believe that there are many opportunities being passed up in Colorado today while we are waging a near hopeless battle to restrict imports and place extra duties on our base metals.

In this respect mining men and industry are not alone in a condition of inactivity. Colorado's various state agencies, including the Bureau of Mines, have not prepared up-to-date geologic, qualitative or quantitative bulletins which would certainly help the industry in determining Colorado's potential in these minerals and assist in their development. We have only to refer to the work being done by our neighboring states to realize our inadequacies. It is not the intent of this statement to criticize either the industry or the state agencies, for we know that many conditions alter and prevent us from doing the things that, for all practical purposes, are perfectly clear. We do wish to call attention to what has gradually happened and keep you informed of the future trend of the mining industry in Colorado.

During the year 1962 several factors have had an influence on mineral production in the State. Uranium quotas have been reduced and several of our larger producers operating under AEC leases have ceased production. For the most part this loss of production has been absorbed by the uranium industry and plans are under way to prepare the industry for a reduced market at the end of 1966 when AEC purchases will be curtailed. A strike which started July 19 at the Climax properties in Lake County and continued through the balance of the year, has had a very serious effect on molybdenum production. This strike idled over a thousand miners in the State. Partial production of this metal resumed late in October when the supervisory employees of the company started limited operations.

For their appreciated assistance during the year, we want to extend thanks to the Colorado Department of Public Health, the United States Public Health Service, the United States Bureau of Mines, the State Compensation Insurance Fund and other agencies who extended their generous services to this Department.

The untimely death of our first Director of Natural Resources, Dr. Edward L. Clark, on March 7 was a great loss to the Bureau of Mines and other resource agencies of the State. His untiring efforts towards developing resources of Colorado are most certainly missed by this Department and by the State in general. Dr. Clark's unfinished term was filled by the appointment of Mr. Felix L. Sparks as our second Director of Natural Resources.

Information in this report and the compilation of the same

came from the generous contribution and untiring efforts of every member of this Department, both clerical and inspection. Their unqualified support and loyalty are gratefully acknowledged.

G. A. Franz, Jr.

Radon Daughter Control Program

By David R. Cole, Senior Inspector

The year 1962 saw great strides taken toward the control of radon and its daughter products as a radiation hazard in Colorado's uranium mines. Detailed information on the status of mines and work accomplished is contained elsewhere in this Annual Report.

The need for, organization of, and procedure followed in the Bureau of Mines' Radon Daughter Control Program initiated in June 1961 were described in detail in the Bureau of Mines 1961 Annual Report.

It is the policy of the Bureau of Mines to promote and protect the mining industry in Colorado. To accomplish this we make every effort to work with the operator and assist him in every way possible so that he may continue to produce ores in our State. We are, however, charged to make certain that all miners work in a healthy environment and to protect their health and safety under all conditions. In keeping with this policy, the function of the Radon Daughter Control Program is to reduce the concentration of radon daughter products in the atmosphere of Colorado's uranium mines to acceptable limits, thereby lessening the possibility of Colorado's uranium miners contracting lung cancer as a result of this radiation hazard. This is accomplished by evaluating the hazard through air sampling and initiating corrective ventilation when required.

On September 28, 1962 a directive was issued from the Denver Office of the Bureau of Mines to all uranium mine operators in the State. This directive restated the Bureau of Mines' position, policy, and procedure in respect to radon daughter concentrations in excess of allowable limits. As a result of the mine operators' support and cooperation with the Junior Inspectors and other Bureau of Mines personnel, the great strides aforementioned were possible.

Keeping the miners' exposure to radon and its daughter products within acceptable limits is a continuing problem requiring periodic evaluation of the operating uranium mines along with appropriate changes in ventilation systems as mining progresses and conditions change. With the continued cooperation and effort of the uranium mine operators and their employees, this radiation hazard can be kept under control.

In conjunction with the Control Program, the Bureau of Mines is giving all possible assistance to the Atomic Energy Commission, United States Public Health Service, United States Bureau of Mines, Colorado State Department of Public Health, other agencies, and the mine operators. Through the cooperation and material support of the United States Public Health

Department and the Colorado State Department of Public Health facilities are available at the Bureau of Mines Naturita Field Office to calibrate the radiation detection equipment used in this program. This service is available to mine operators and regulatory agencies within Colorado as well as those in neighboring states.

During 1962 the Bureau of Mines has continued to receive the results of radon daughter sampling conducted by other regulatory agencies and mine operators, as well as the exchange of other pertinent information, and is grateful for these contributions and support.

The cooperation that has been received by the Bureau of Mines in carrying out this program has been excellent in all respects from all concerned and is gratefully acknowledged.

Minerals In 1962

Colorado's 1962 mineral production of \$337,534,623 was 15% lower than the 1961 production of \$396,702,149, which was an all time high. Increased production in industrial minerals was not sufficient to overcome the loss of production in petroleum, gold, molybdenum, uranium and vanadium ores. Of the thirty major minerals produced in 1962, 16 showed an increase and 14 showed a decline.

Cutbacks in uranium allotments, along with a lower per pound price and cancellation of most of Colorado's Atomic Energy Commission leases, was responsible for the reduction in uranium and vanadium production. A strike at the Climax properties in Lake County, which extended from mid-July to the end of the year, was responsible for the reduction in molybdenum, tungsten, tin and pyrites. A general levelling off of production in Colorado's leading oil fields, with a minimum of new discoveries, was responsible for the drop in petroleum production. Closing of the Golden Cycle Mill at Cripple Creek at the end of 1961, and all of the properties shipping to this mill, cut Colorado's gold production by 30%. Present gold production comes from other mines in the State as a co-product with lead, copper, zinc and silver.

Increased production of silver, zinc and copper was influenced by steady and improved mining methods at the Idaho Mining Company and Camp Bird properties in Ouray and San Miguel Counties, at the New Jersey Zinc properties in Eagle County, at the Emperius Mining Company properties in Mineral County, at the Standard Metals property in San Juan County and at the Rico-Argentine properties in Dolores County. The average price of silver in 1962 increased .14¢ over the price received in 1961 and informed sources claim a price of

\$1.29 will be attained in 1963. This probable increase is having some effect in stimulating the sampling and opening of old properties which have been closed for many years. As most Colorado ores are complex, this stimulation will no doubt increase production in lead and zinc to some extent. With full-scale operations resumed at Climax on increased tonnage, molybdenum, tin, tungsten and pyrite production should be back to normal or above in 1963. With cut-backs in uranium and vanadium production, and with an almost 100% participation in the Atomic Energy Commission's stretch-out program to 1970, production of these minerals can be expected to decrease considerably for the next few years.

Colorado's nonmetallic and industrial mineral production has shown gains in the last few years, primarily due to increased building and construction in the State. Highway construction, reclamation projects and general building have created an ever increasing demand for cement, sand and gravel, stone and other building materials. This condition will most likely continue for the next few years.

Mineral fuels production, which includes petroleum, gas and coal, levelled off in 1962 and showed a definite decrease over the preceding year. This condition was due primarily to lower petroleum production in Rio Blanco and Morgan Counties and can be classed as temporary. The bulk price per barrel of crude petroleum used to calculate the 1962 petroleum production was \$2.88 per barrel as against \$2.90 in 1961. Gas was priced at .12¢ per thousand cubic feet in 1962. Coal production decreased some 308,000 tons over 1961 production but with increased activity in northern Colorado, this production should be up considerably in 1963. There was no activity in oil shale development or production during 1962, however several large oil companies and Colorado organizations have submitted bids to the Interior Department for development and research program authority.

Colorado's oil shale potential, along with the industrial and nonmetallic mineral potential if and when properly catalogued and developed, will eventually surpass any production previously recorded. To properly exploit these minerals, much research and development work is necessary which will require the coordinated effort of every mineral agency in the State.

Some average prices used in calculating Colorado's mineral production in 1962 are as follows: Gold — \$35.00 per ounce, Silver — \$1.08 per ounce, Copper — .306¢ per pound, Lead — .095¢ per pound, Zinc — .116¢ per pound, Molybdenum — \$1.40 per pound, Uranium — \$8.00 per pound, Vanadium — \$1.80 per pound.

Information in this report is gathered by Bureau of Mines inspectors and office personnel and, although the production

figures cannot be accepted as final they are as nearly accurate as possible to secure at this early date. They are intended as a preliminary indication and cannot be used for tax or other valuation purposes. Petroleum and coal production is supplied by the Colorado Oil and Gas Conservation Commission and the State Coal Mine Division and the dollar value is calculated by this office. All production figures are calculated by multiplying the unit of production by the average yearly prices. Metallic and nonmetallic mineral production figures are received directly from the operator and in some cases where these reports are incomplete, an estimate from inspection reports is used.

Production Of Metals, Nonmetallics, Petroleum And Coal

State Totals

	1962 Production	Cumulative Through 1962
Metallics		
Molybdenum	\$ 46,695,020	\$ 613,032,788
Uranium	45,551,080	781,688,804
Vanadium	9,964,400	80,414,260
Zinc	10,346,567	377,599,139
Tungsten	3,052,781	41,281,453
Lead	3,270,316	333,610,658
Copper	2,530,305	101,655,543
Gold	1,719,102	915,719,529
Silver	2,123,519	595,175,508
Pyrite	836,480)	
Iron	170,789)	7,307,363
Beryl	178,316	1,130,289
Tin	61,348	436,783
Miscellaneous Metallics	342,850	11,190,120
Total Metallic Mineral Production	\$126,842,873	\$3,860,242,237
Nonmetallics		
Cement	18,245,522	143,676,206
Sand & Gravel.....	18,539,971	131,813,150
Stone	2,609,340	23,780,429
Limestone	1,926,382	33,394,754
Clay	1,612,010	17,082,993
Fluorspar	1,619,460	30,876,757
Feldspar, Mica, Gypsum.....	434,414	10,166,207
Volcanic Scoria, Pumicite.....	81,734	3,479,422
Peat Moss	72,944	276,710
Gemstones	40,000	272,678
Miscellaneous Nonmetallics	1,490,042	3,880,017
Total Nonmetallic Mineral Production	\$ 46,671,819	\$ 398,699,323
Mineral Fuels		
Crude Oil	122,334,166	1,767,230,853
Gas Sold	9,099,431)	
Gas (All classes, well head value)..	11,688,103)	147,902,364
Coal	20,898,231	2,106,885,856
Total Mineral Fuel Production	\$164,019,931	\$4,022,019,073
TOTAL STATE MINERAL PRODUCTION	\$337,534,623	\$8,280,960,633

County Activity And Production

ADAMS (1)

*Brighton

Area 1,250 square miles

Plants, projects—144 men

Production from some eighty wells in the Badger Creek, Beacon, Busy Bee, Little Beaver, Middlemist, Muddy Creek, Deer Trail, Doherty, Knox, Leader, Noonan Ranch, Poison Springs, Rosner, Second Creek, Simpson, Windy Hill, Woodrow West and other fields in Adams County maintained a steady production of oil and gas during the year. Boise Cascade Sand & Gravel Company, Brannan Sand & Gravel Company and the Cooley Sand & Gravel Company operated pits from which some gold and silver were recovered from the washed gravel which added to the minerals produced. Oil exploration drilling was normal.

Gold	\$ 41,185
Silver	2,067

Total	\$ 43,252
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Sand & Gravel	2,404,905
Miscellaneous	500,000

Total	\$ 2,904,905
-------------	--------------

Petroleum	1,751,005
Gas Sold	100,087

Total	\$ 1,851,092
-------------	--------------

TOTAL PRODUCTION FOR COUNTY.....	\$ 4,799,249
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ARCHULETA (4)

*Pagosa Springs

Area 1,364 square miles

Oil—85 men

Minerals, fuels and sand and gravel made up the mineral production of Archuleta County in 1962. Gramps field, the largest petroleum producer in Archuleta County, operated by the Oriental Refining Company and located south and east of Chromo, had a steady production from some 23 wells during the year. Other producers were in Mancos field, the Greenhorn

*County seats

field and the Mesa Verde field. Some highway construction was noted in the Arboles and Navajo Reservoir Area and some rare metal prospecting was evident in other parts of the County.

Sand & Gravel	\$ 56,423
Petroleum	\$ 229,994

TOTAL PRODUCTION FOR COUNTY.....\$ 286,417

BACA (2)

*Springfield

Area 2,565 square miles

Plant, oil—60 men

The Garvey Drilling Company, Horizontal Oil and Gas Company, Michaelis Graham Drilling Company, Smith Boor Drilling Company, The Davis Drilling Company and Earl F. Wakefield were active in exploration drilling in the County with reported fair success. With oil and gas produced from over 12 wells in the County, mineral fuel production can be expected to steadily increase. Sand and gravel operations added to the economy of mineral production in this area.

Sand & Gravel	\$ 8,500
Petroleum	588,963
Gas Sold	80,784

Total	\$ 669,747
-------------	------------

TOTAL PRODUCTION FOR COUNTY.....\$ 678,247

BOULDER (1)

*Boulder

Area 758 square miles

Mines, plants, quarries, project, oil—279 men

Fluorspar, petroleum, sand and gravel, stone, peat, and clay, with some production of gold and silver, were the principal mineral commodities of Boulder County in 1962. The increased silver price was an inducement for several of the silver mines in the area to resume development and exploration work. The Cash and Rex mines in the Gold Hill area were further developed by the Steen Mining Company for gold and silver. The Burlington Mine at Jamestown, operated by the General Chemical Division of the Allied Chemical Corporation, was the largest mining operation in the County during the year. Their crude fluorspar ore was trucked from the mine to the company-operated mill at Valmont. The Burlington Mine was put on a

*County seats

semi-stand-by basis in December and production came from pulling stopes only. The mill at Valmont started on a five-day per month basis in December. Stone production, consisting of various colors of sandstone from the many quarries in the County, increased over last year's production. Red, pink and white sandstone is quarried and shipped to many areas in the Rocky Mountain region. The cut stone is used in building construction and the uncut stone is used as flagstone and for decorative purposes. Boulder County's once flourishing tungsten industry was at a standstill during 1962 and has been so since the government supported price on tungsten was lifted in 1956.

Tungsten	\$ 10,000
Uranium .....	.....
Miscellaneous	5,000
Total	\$ 15,000

Sand & Gravel	464,314
Fluorspar	1,619,460
Stone	195,212
Clay	693
Peat	14,521
Total	\$ 2,294,200

Petroleum	\$ 7,474
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TOTAL PRODUCTION FOR COUNTY.....	\$ 2,316,674
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CHAFFEE (3)

*Salida

Area 1,040 square miles

Mine, plants, quarries, projects—101 men

Granite, feldspar, limestone, and sand and gravel were Chaffee County's principal mineral products in 1962. The County's past production of gold, lead and silver has ceased with the exception of several small prospect operations. The Homestake Mine, operated by M & S, Inc., produced feldspar. The Colorado Granite Grit Corporation produced crushed granite for the poultry industry. Limestone was produced from the Monarch Quarry, located on Monarch Pass, which was operated by the Colorado Fuel & Iron Works. Small amounts of granite monumental stone were quarried in the various quarries near Salida.

*County seats

Miscellaneous	\$ 1,000
Sand & Gravel	175,057
Limestone	344,513
Stone	27,300
Feldspar, Mica, etc.	102,204
Miscellaneous	22,000
Total	\$ 671,074
TOTAL PRODUCTION FOR COUNTY.....	\$ 672,074

CLEAR CREEK (1)

*Georgetown

Area 395 square miles

Mines, plants, placers—153 men

Although very little mineral production was realized from Clear Creek County during the year, several important development operations were active. Development work at the Cascade Tunnel on Ute Creek by the Humphreys Engineering Company gave promising results to the operators. Some of their developed ore was shipped to the smelters in Texas and some was milled in the Silver Spruce Mill. Exploration and development work at the Urad Mine west of Berthoud Pass by C. Ryan & Son for the Climax Molybdenum Company continued during the year and the operator is hopeful of mining this large molybdenum deposit. Kerr-McGee Oil Industries did exploration drilling on the Gold Dirt group of mines two miles northwest of Empire on property owned by Tedrow and Nelson. Operators were encouraged by the rise in the price of silver during the year and many of the County's old silver mines were reopened for sampling and prospecting work. Placer mining was evident along Clear Creek east of Idaho Springs.

Gold	\$ 4,417
Silver	8,861
Lead	6,040
Zinc	2,200
Total	\$ 21,518
Sand & Gravel	\$ 17,554
TOTAL PRODUCTION FOR COUNTY.....	\$ 39,072

*County seats

CONEJOS (2)

*Conejos

Area 1,274 square miles

Plants, projects—94 men

The Great Lakes Carbon Corporation operated their perlite processing plant throughout the year 1962 on ores shipped into Colorado from northern New Mexico. Sand and gravel production was normal for the year.

Sand & Gravel	\$	38,329
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TOTAL PRODUCTION FOR COUNTY.....	\$	38,329
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COSTILLA (2)

*San Luis

Area 1,220 square miles

Quarry, project, oil—22 men

Volcanic scoria was produced at the Mesita Hill Quarry, operated by Colorado Aggregate, Inc., and sand and gravel was produced from several pits in the County. The Alamosa Drilling Company conducted exploratory oil well drilling on the Vaugen No. 1 Well, one and one-half miles northeast of San Luis.

Sand & Gravel	\$	223,655
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Volcanic Scoria		21,500
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Total	\$	245,155
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TOTAL PRODUCTION FOR COUNTY.....	\$	245,155
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CUSTER (2)

*Westcliffe

Area 738 square miles

Mines, quarry, project—52 men

Encouraging gold and silver ore development work was continued at the Buckeye-Holt property, located 24 miles southwest of Wetmore, by Eisenhour & Decker and at the Copper Reef and Tomboy properties, operated by Jack Best and Charles and Lyman Akin, respectively. The increased price of silver should have a beneficial influence on the development work at these properties. Clay was produced at the Lawson Quarry and vermiculite and perlite were produced at the Ponderosa and Rosita Quarries, respectively. The Ponderosa Quar-

*County seats

ry is located seven miles northeast of Westcliffe and the Rosita Quarry is located one and one-half miles southeast of Rosita.

Sand & Gravel	\$ 80,250
Perlite	48,633

Total	\$ 128,883
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TOTAL PRODUCTION FOR COUNTY.....	\$ 128,883
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DELTA (4)

*Delta

Area 1,161 square miles

Plant, projects, oil—82 men

Agricultural grade gypsum and calcium sulphate were mined by the Chipeta Mining Company from their quarry near the junction of the Smith Fork and the Gunnison River. This material was processed in the company plant which produces commercial fertilizer. The Bud King Construction Company continued work on the Smith Fork reclamation project and the several carbon dioxide wells, located between Delta and Paonia, were steady producers of carbon dioxide gas during the year. Sand and gravel was produced from several pits located on the Gunnison and Uncompahgre Rivers.

Sand & Gravel	\$ 12,614
Gypsum	6,000

Total	\$ 18,614
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TOTAL PRODUCTION FOR COUNTY.....	\$ 18,614
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DENVER (1)

*Denver

Area 73 square miles

Plants—162 men

The American Smelting & Refining Company's Globe Plant and the Allied Chemical Corporation, General Chemical Division's Denver Plant, both located in metropolitan Denver, continued to operate all year. The American Smelting & Refining Company Plant produced refined metals and the General Chemical Plant produced various chemicals and acids. Many of Colorado's mining and milling companies, as well as many oil companies, have their main offices in the Denver area.

Sand & Gravel	\$ 211,457
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TOTAL PRODUCTION FOR COUNTY.....	\$ 211,457
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*County seats

DOLORES (4)

*Dove Creek

Area 1,029 square miles

Mines, plants, projects, oil—115 men

Lead-zinc mining and milling operations of the Rico-Argentine Mining Company continued steady during the year on ores from the St. Louis and Mountain Spring properties located at Rico. The Ramco Sulphuric Acid Plant, located north of Rico, operated most all year and was closed in late December. Acid from this plant was sold to the various uranium mills in the area. Some prospecting and development work was recorded at the Rosebud property in the Dunton area. Work continued on Highway 145 between Ophir and Dolores.

Gold	\$ 2,575
Silver	45,600
Copper	4,300
Lead	150,000
Zinc	232,000
Pyrite	612,000

Total	\$ 1,046,475
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Sand & Gravel	\$ 11,000
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TOTAL PRODUCTION FOR COUNTY.....	\$ 1,057,475
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DOUGLAS (1)

*Castle Rock

Area 844 square miles

Mines, plants, quarry—34 men

Clay mines, located east of the mountains and operated by the Robinson Brick & Tile Company, Denver Brick & Tile Company and Stroud Whisenhunt, had a steady clay production during the year. Some feldspar and considerable sand and gravel production was recorded from the County.

Sand & Gravel	\$ 625,867
Limestone	2,914
Clay	231,993
Miscellaneous	34,450

Total	\$ 895,224
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TOTAL PRODUCTION FOR COUNTY.....	\$ 895,224
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*County seats

EAGLE (3)

*Eagle

Area 1,686 square miles

Mine, plant, quarry—661 men

The Eagle Mine, consolidated from several properties on Battle Mountain in 1915 by the Empire Zinc Company and now operating as the New Jersey Zinc Company, has been in continuous operation for over 47 years. This lead, zinc, copper, silver property presently produces in excess of 22,000 tons per month crude ore and is of vast importance to the economy of Eagle County and the State. Careful planning, coupled with economical operating procedures, enables this company to continue operations in the face of high material and labor costs. Despite these adverse operating conditions, this company has maintained an exceptional safety record during the years. The other Eagle County operator is the Lava Products, Inc., producing volcanic cinders from their Dotsero Quarry. The recently authorized Frying Pan-Arkansas project will result in more employment in this County.

Gold	\$ 214,900
Silver	621,756
Copper	319,652
Lead	690,840
Zinc	5,718,488
<hr/>	
Total	\$ 7,565,636
Sand & Gravel	13,001
Scoria	8,986
<hr/>	
Total	\$ 21,987
<hr/>	
TOTAL PRODUCTION FOR COUNTY.....	\$ 7,587,623

*County seats

EL PASO (2)

*Colorado Springs

Area 2,159 square miles

Plant, quarries, projects—588 men

Excavation operations at the NORAD project by the Utah Mining & Construction Company were near completion at the end of this year. Completion of two small diameter inclined raises to the surface and some slabbing operations were all that remained in the way of excavation to complete the first phase of this project. Both the Lennox Breed and Castle Quarries, located north and west of Colorado Springs, operated all during the year producing limestone and concrete aggregate. Sand and gravel production and highway construction added to employment in the County.

Sand & Gravel	\$ 1,293,571
Limestone	30,000
Total	\$ 1,323,571

TOTAL PRODUCTION FOR COUNTY.....\$ 1,323,571

FREMONT (2)

*Canon City

Area 1,562 square miles

Mines, plants, quarries, projects, oil—326 men

Limestone and cement manufacturing by the Ideal Cement Company at Portland has been by far the largest mineral operation in Fremont County for several years. The operation of 10 mines and 16 quarries in 1962 exemplified the diversified mineral activity in this County. Limestone, gypsum, dolomite, uranium, ornamental stone, building stone, travertine, perlite, clay, quartz, marble and granite aggregate are some of the products produced in this County. The New Jersey Zinc Company operated their sintering plant seven days a week during 1962. During the year the Cotter Corporation Mill was in steady production on refining uranium ores from Fremont County and counties along the Front Range of Colorado. Installation of a new research laboratory at the Cotter Plant will enable this company to continue research and metallurgy on such minerals as zirconium, titanium, molybdenum, silver, tungsten and some of the rare earths. Sand and gravel production and road projects added to employment during the year. Colorado's oldest producing oil field at Florence continued to be active.

*County seats

Uranium	\$ 3,911,160
Beryllium	11,717
Miscellaneous	500

Total	\$ 3,923,377
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Cement	8,235,899
Sand & Gravel	105,648
Limestone	545,099
Dolomite, etc.	86,000
Stone	86,839
Clay	14,960
Vermiculite	4,510
Feldspar, Mica, etc.	718
Gypsum	71,000
Miscellaneous	1,465

Total	\$ 9,152,138
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Petroleum	\$ 83,638
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TOTAL PRODUCTION FOR COUNTY.....	\$ 13,159,153
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GARFIELD (3)

*Glenwood Springs

Area 3,000 square miles

Mine, plants, quarries, project—287 men

Late in 1962 the Department of Interior issued invitations to institutions, organizations, companies and others to submit bids and programs for reopening the Government Oil Shale Mine and Plant west of Rifle. No definite plans had been announced as to the success of these requests by the end of the year, however it is almost assured that some activity in oil shale will be evident in the near future. The Rifle plant of Union Carbide Nuclear Corporation, located in Rifle, continued production of refined uranium and vanadium ores during the year, processing in excess of 1,000 tons of crude ore per day. No work was recorded at the Rifle vanadium mine. Limestone was quarried at the Basic Chemical Quarry, located five miles northeast of Glenwood Springs. Petroleum and gas were produced in the western part of the County as was sand and gravel along the Colorado River.

Sand & Gravel	\$ 437,914
Limestone	126,136

Total	\$ 564,050
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Gas Sold	\$ 168,554
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TOTAL PRODUCTION FOR COUNTY.....	\$ 732,604
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*County seats

GILPIN (1)

*Central City

Area 149 square miles

Mines, plants, placers—83 men

Increased activity in placer mining was evident in Gilpin County during 1962. Ten separate placer operations were recorded, however, gold production was light. Development work was continued at the Wilma molybdenum property located at the head of Jenny Lind Gulch near Apex by Nye Metals, Inc. Some development and improvement work was continued at the Glory Hole property and mill, operated by Glory Hole, Inc. Altogether 15 gold and silver properties were under various stages of development work during the year. Peat was mined from four bogs and two mills in the County were operated for a short time during the year. The County's tourist mines were popular during the summer months. Mineral activity in this County, like many other counties in the State, was retarded due to a lack of custom milling and smelter facilities.

Gold	\$ 11,549
Silver	993
Copper	243
Lead	3,985
Zinc	361
Total	<hr/> \$ 17,131

Sand & Gravel	2,000
Peat	14,423
Total	<hr/> \$ 16,423

TOTAL PRODUCTION FOR COUNTY.....	\$ 33,554
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GUNNISON (3 & 4)

*Gunnison

Area 3,243 square miles

Mines, plants, quarries, projects—310 men

Eighteen separate mine development operations were listed in Gunnison County during the year. Most of these reported no production. The increased price of silver no doubt had some influence on a few of these operations. The Gunnison uranium mill owned by Kerr-Mac Nuclear Fuels Corporation was closed early in January 1962 as was the Micawber property northwest of Crested Butte. The Micawber mill was moved to Summit County. Development work continued on the big Iron Hill

*County seats

property by Boyles Brothers Drilling Company near Powderhorn. This property is owned by E. I. du Pont de Nemours Company of Wilmington, Delaware. Development work continued on the Forrest Hill property near Taylor Park by the Gaddis Mining Company. The various highway tunnel and dam preparation projects connected with the construction of the Blue Mesa Dam, Curecanti Unit, has added materially to employment in the County. The diversion tunnel that will divert the Guunison River around the dam was driven by Quad Construction Company, sub-contracting from the Tecon Corporation, the prime contractor.

Miscellaneous	\$ 4,500
Sand & Gravel	102,656
Stone	2,967
Miscellaneous	6,000
Total	\$ 111,623
TOTAL PRODUCTION FOR COUNTY.....	\$ 116,123

HINSDALE (4)

*Lake City

Area 1,062 square miles

Mines—15 men

Development work with some production was recorded from Child's Park Lode operated by W. J. Crain, the Edna Mine operated by Swanson House, the Golconda operated by Bob Watson and Carl Jensen, the Highland Chief operated by Ajax Syndicate, and the Silver Jack operated by Tim Ingram and G. E. Wetzel. Transportation and the high cost of mining material and labor, coupled with low metal prices, have seriously curtailed gold, silver, lead and zinc production from this once important mineral area. Considerable highway improvement was made between Lake City and Powderhorn.

Miscellaneous	\$ 5,000
Sand & Gravel	\$ 5,502
TOTAL PRODUCTION FOR COUNTY.....	\$ 10,502

JACKSON (1)

*Walden

Area 1,628 square miles

Oil—50 men

*County seats

Petroleum and gas production from over 54 wells located in four separate fields was normal for the year. New wells drilled, compensated for those that were abandoned. Mining was at a complete standstill in the County during the year.

Sand & Gravel	\$ 2,500
Petroleum	1,586,678
Gas Sold	23,425
<hr/>	
Total	\$ 1,610,103
TOTAL PRODUCTION FOR COUNTY.....	\$ 1,612,603

JEFFERSON (1)

*Golden

Area 791 square miles

Mines, plants, quarries, projects, oil—384 men

Clay production in Jefferson County again was high among the various counties in the State. Pits and mines operated by the Denver Fire Clay Company, the Denver Brick & Pipe Company, Lakewood Brick & Tile Company, The Robinson Brick & Tile Company and the George W. Parfet Estate, Inc. were the major producers. Thirty mines and six quarries were listed as active during the year. The Schwartzwalder Mine, operated by Denver-Golden Corporation, was the largest producer of uranium ores on the east slope and considerable uranium ore was mined by the Yellow Queen Uranium Company and the Cotter Corporation. Most of these ores were trucked to the Cotter Corporation mill at Canon City. Beryl ore was produced and processed at the Beryl Ores Company plant operated by Michael D. Lyons. Lightweight aggregate was quarried and processed at Aggregate Inc., at Calcite Aggregate Company and the Idealite quarry and plant located on Rocky Flats. Sand and gravel production from the many pits in the County showed an increase this year over 1961. Some gold and silver was recovered from these operations. Varicolored stone was quarried and crushed for use in the building trade. Several new white quartz quarries were opened up in the Platte Canyon area during the year and most of the mined quartz was hauled to Canon City for crushing.

*County seats

Gold	\$ 16,705
Uranium	1,802,080
Miscellaneous	2,000
Total	\$ 1,820,785
Sand & Gravel	1,969,749
Stone	115,244
Clay	605,659
Miscellaneous	200,000
Aggregate	672,984
Total	\$ 3,563,636
TOTAL PRODUCTION FOR COUNTY.....	\$ 5,384,421

LAKE (3)

*Leadville

Area 384 square miles

Mines, plants, projects, placer—2,344 men

Production, development work and construction work at the Climax property of American Metals Climax, Inc. was completely halted or seriously reduced this year by a strike of O.C.A.W. Local No. 2-4410 called on July 18, 1962. The strike continued for the balance of the year and ended on January 9, 1963. On October 26, the mine and mill was started by supervisory employees and continued to operate on reduced tonnage until the strike was settled. Prior to work stoppage in July, the Company was producing around 37,000 tons per day and development work was in progress in the No. 4 and No. 5 shafts. No. 18 mill was in the process of being installed for the purpose of handling increased tonnage. Bechtel Corporation started preliminary work and surveys on the Homestake Water Diversion Project in August and major work should start in 1963. The Frying Pan-Arkansas project, approved late in 1962, will add employment to Lake County when work is started in 1963. Some placer mining was reported during the year as was other exploration and development work.

Gold	\$ 144
Molybdenum	46,695,020
Tungsten	3,042,781
Pyrite	224,480
Tin	61,348
Miscellaneous	10,000
Total	\$ 50,033,773
Sand & Gravel	\$ 90,462
TOTAL PRODUCTION FOR COUNTY.....	\$ 50,124,235

*County seats

LA PLATA (4)

*Durango

Area 1,691 square miles

Mines, plants, projects, placers, oil—654 men

Seven mines, three mills, four projects and one peat bog were listed in the mineral industry of La Plata County in 1962. Some production was noted from the gold, silver, lead and copper properties in La Plata Canyon but most of the work was on prospecting and development. Most activity was in the La Plata Canyon area. The Vanadium Corporation of America mill located in Durango operated on steady tonnage from uranium and vanadium mines in Colorado and New Mexico. Safety improvements were made in the mill and the mill waste disposal system was improved. Work on the Lemon Dam and Florida Canal by A. S. Horner Construction Company and the Colorado Construction Company continued during the year with completion contemplated in 1963. This project is located 17 miles northeast of Durango. Some sand and gravel production from various pits was reported. Gas and oil was produced from four fields in the County, the Mesa Verde field being the largest with 217 wells. Gas and oil exploration in the southwest of the County continued.

Gold	\$ 3,895
Silver	1,039
Miscellaneous	2,500

Total	\$ 7,434
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Sand & Gravel	\$ 244,050
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Petroleum	164,091
Gas Sold	3,742,611

Total	\$ 3,906,702
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TOTAL PRODUCTION FOR COUNTY.....	\$ 4,158,186
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LARIMER (1)

*Fort Collins

Area 2,640 square miles

Mines, plants, quarries, oil—237 men

Oil production from over 38 wells in the seven fields in the County maintained steady production during the year with a normal amount of exploration and development work being completed. Red, pink and white sandstone was produced from the County's 16 operating quarries. Gypsum rock was quarried

*County seats

at the Goodwin Quarry by Ernest W. Munroe and limestone was quarried and crushed at the Holly Quarry operated by Norberg Construction Company. By far the largest mineral operation in the County was the Ideal Cement Company operations at the Boettcher Quarry and La Porte Cement Plant. Both the quarry and plant are located two miles north of Fort Collins and have made steady and continued production during the year. Mica and beryl ores were produced at the Langston and Jolex property located at Columbine, Colorado. Beryllium oxide was produced from beryl ore at the Mineral Concentrates & Chemical plants located at Loveland and Berthoud, Colorado. Some beryl ores were trucked into the plant from Park County. Green quartz was mined at the Yaquina Mine owned by F. R. Koenig and King Koenig and operated by the Alcott Coal & Ice Company of Arvada.

Beryllium	\$ 5,600
Cement	10,009,623
Sand & Gravel	248,329
Limestone	877,720
Stone	157,478
Feldspar, Mica, etc.	50,003
Gypsum	204,489
Total	\$ 11,547,642
Petroleum	\$ 529,240
TOTAL PRODUCTION FOR COUNTY.....	\$ 12,082,482

LAS ANIMAS (2)

*Trinidad

Area 4,798 square miles

Mines, quarry, project, oil—112 men

Oil prospecting and development continued in three fields in the County with one gas well listed as producing. Clay was mined by the Empire Clay Products Company, located 35 miles southeast of Trinidad, and by the Scott Mining Company from their Santa Fe property at Starkville. Sand and gravel was produced from the County's various pits.

Sand & Gravel	\$ 112,886
Clay	44,650
Total	\$ 157,536
Gas Sold	\$ 4,018
TOTAL PRODUCTION FOR COUNTY.....	\$ 161,554

*County seats

LOGAN (1)

*Sterling

Area 1,849 square miles

Projects, oil—440 men

Oil production was steady. Several new wells were drilled and some were completed and put in production. New interest was shown in the northern part of the County.

Sand & Gravel	\$ 168,712
Petroleum	13,282,459
Gas Sold	875,740
<hr/>	
Total	\$ 14,158,199

TOTAL PRODUCTION FOR COUNTY.....\$ 14,326,911

MESA (4)

*Grand Junction

Area 3,334 square miles

Mines, plants, quarries, projects, oil—1,152 men

Although Mesa County maintained its third place in uranium and vanadium production for 1962, both employment and production in the County uranium industry dropped slightly. The cancellation of all Atomic Energy Commission leases and consolidation of properties reduced the number of mines operating during the year. The Climax Uranium Company mill, located in Grand Junction, operated on a slightly increased tonnage from ores mined on the Colorado Plateau and on ore from their own company-operated mines. Increased activity and production came from the Beaver Mesa area while production from Outlaw and Calamity Mesa decreased. Gas production in Mesa County increased during the year with production coming from 11 fields in the western part of the County. White quartz was produced from the Jacobs Ladder area and was shipped to Colonna & Company at Canon City. Sand and gravel production and road projects added to the County employment.

*County seats

Uranium	\$ 4,238,904
Vanadium	1,478,741
Total	\$ 5,717,645
Sand & Gravel	898,193
Stone	41,804
Clay	7,600
Total	\$ 947,597
Gas Sold	\$ 217,306
TOTAL PRODUCTION FOR COUNTY.....	\$ 6,882,548

MINERAL (3)

*Creede

Area 923 square miles

Mines, plant—75 men

Mining activity in Mineral County this year consisted of development work by the Outlet Mining Company at their Mexico Mine and production from the Commodore and Amethyst properties of the Emperius Mining Company. Production of lead-zinc-silver from the Amethyst and Commodore mines was milled in the company mill, located below Creede, and this production ranked third in the State. Considerable improvement in mine ventilation was made at the Emperius property which enabled the company to operate on a more steady basis during the year. Some prospect drilling was done by the Humphries Engineering Company on their property above the Amethyst Mine.

Gold	\$ 20,895
Silver	304,273
Copper	163,073
Lead	406,930
Zinc	615,579
Total	\$ 1,510,750
Sand & Gravel	\$ 10,000
TOTAL PRODUCTION FOR COUNTY.....	\$ 1,520,750

MOFFAT (3)

*Craig

Area 4,761 square miles

Mines, plant, oil—382 men

Uranium activity was increased in Moffat County for the year when underground mining was continued from the bottom of the Trace Elements pits. Drifts and crosscuts were extended to known ore bodies that had been previously test drilled. This property, owned and operated by Union Carbide Nuclear Company, had continuous operations during the year and their ore was milled at the company's 1,000-ton mill, located near Maybell. Mining operations at the property have completed six years of mining without a lost-time injury and a Safety Achievement Award will be presented to the Mining Department early in 1963. Oil production was steady from the Danforth Hills, Maudlin, Elk Springs, Moffat, Isles Dome, Powder Wash, and Hiawatha fields. Sand and gravel was also produced in the County during the year.

Gold	\$	350
Uranium

Total	\$	350
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Sand & Gravel	\$	108,872
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Petroleum	2,865,770
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Gas Sold	1,041,913
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Total	\$	3,907,683
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TOTAL PRODUCTION FOR COUNTY.....	\$	4,016,905
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MONTEZUMA (4)

*Cortez

Area 2,097 square miles

Mines, projects, oil—247 men

Two mining properties were active in Montezuma County in 1962 and these were the Discovery Level on East Mancos Creek operated by the Hardway Mining Company and the Twin Canyon Group operated by Charles and Wesley Potts. Some small mineral production was noted. Four construction projects, along with petroleum and gas production, added to employment in the County. Oil and gas production came from eleven wells located in ten different fields in the County. Texaco Inc., Delhi Taylor, The California Company, the Ohio Oil

*County seats

Company, Bird-Frost and Phillips Petroleum Company were among the principal petroleum and gas producing companies.

Miscellaneous	\$ 20,000
Sand & Gravel	\$ 785,702
Petroleum	666,720
Gas Sold	44,601
Total	\$ 711,321
TOTAL PRODUCTION FOR COUNTY.....	\$ 1,517,023

MONTROSE (4)

*Montrose

Area 2,240 square miles

Mines, plants, projects, oil—1,492 men

Expiration of Atomic Energy Commission leases on the Colorado Plateau had considerable effect on uranium and vanadium production in Montrose County during 1962. Among some of the large producing mines that have been closed were the Bowen Mine and the Worcester Mine on Atkinson Mesa. Montrose County, however, remained in first place in uranium and vanadium production. A sulphuric acid plant was added to the Union Carbide Nuclear Uravan Plant complex during the year and the plant was in operation late in 1962. Improvements were made in the flow sheet at the new Vanadium Corporation of America up-grading plant at Naturita. Crude uranium and vanadium ore for both plants was mined from both company and privately owned mines in the area. The principal uranium producing areas in Montrose County are Club Mesa, Long Park, Bull Canyon, Carpenter Flats, Atkinson Mesa, the Dolores Rim and Monogram Mesa. Mines in these areas have been steady producers since the Atomic Energy Commission U-308 Procurement Program was started in 1949. Some development activity was noted at the Cashin Mine, the County's only copper mine, located on La Sal Creek near the Utah border. Sand and gravel and gas production added to the County's economy. Kerr-McGee Oil Industries has been drilling at the Uravan No. 1 Unit all during the year. This well has surpassed all previous depths in Colorado and was down to a point over 17,100 feet at the end of the year. A Colorado Bureau of Mines District Office from which the State Radiation Program is directed, is located in Naturita.

*County seats

Uranium	\$ 19,558,224
Vanadium	4,710,061
Total	\$ 24,268,285
Sand & Gravel	\$ 90,290
Gas Sold	\$ 1,224
TOTAL PRODUCTION FOR COUNTY.....	\$ 24,359,799

MORGAN (1)

*Fort Morgan

Area 1,300 square miles

Projects, oil—440 men

Petroleum production from over 330 wells, located in excess of 54 fields, placed Morgan County petroleum production third in the State. Water flooding continued at Adena field, the second largest field in the State, which insures a maximum recovery from this field. Continuous exploration drilling was reported during the year with the average number of completions. Sand and gravel production was steady.

Sand & Gravel	\$ 142,165
Petroleum	15,923,485
Gas Sold	1,106,474
Total	\$ 17,029,959
TOTAL PRODUCTION FOR COUNTY.....	\$ 17,172,124

OURAY (4)

*Ouray

Area 540 square miles

Mines, plant, project—207 men

The mining operations of the Idarado Mining Company, located in both Ouray and San Miguel Counties, were steady during 1962 and the production and employment created by these operations were most beneficial to Ouray, San Juan and San Miguel Counties. Some 30,000 tons per month of crude gold, silver, lead, zinc and copper ore were mined throughout the year and milled in the company mill at Telluride. Considerable prospecting and development mining was evidenced at the Hidden Treasure Mine by Sesquehanna Western Inc. in the

*County seats

Sneffels district, by the Rouville Mining Company in the Red Mountain area, by the Bi-Metallist Mining Company on Potosi Mountain, and by M. W. Waldrum on the Mineral Farm property. Operations at the Camp Bird property west of Ouray were fairly steady during the year on silver, gold, lead and zinc ore which was milled in the company mill at Camp Bird Colorado. Several other mines in the County completed assessment work with some additional development of existing ore bodies.

Gold	\$ 319,520
Silver	258,026
Copper	560,160
Lead	540,218
Zinc	1,019,639
<hr/>	
Total	\$ 2,697,563
Sand & Gravel	\$ 12,540
TOTAL PRODUCTION FOR COUNTY.....	\$ 2,710,103

PARK (1 & 2)

*Fairplay

Area 2,178 square miles

Mines, plants, placer—36 men

All test runs at the new Mineral Concentrates & Chemical Company Tarryall beryl mill, located on Badger Flats, were completed in 1962 and the plant went into production. Ore was received from the Boomer Mine, operated by the U.S. Beryllium Company, and from other beryl properties in the area. This is a custom mill and can handle any adaptable beryl ore received. Construction work was started on the Progressive Mill and Smelter, located north and west of Fairplay. This mill is being constructed by a joint community organization and will be designed to handle any and all ores mined in the Fairplay district. A plant of this type should be a great aid to mining activity in the northern part of the County. Several other silver, gold and lead properties as well as some placer mining operations were active during the summer months. Sand and gravel, feldspar and other minerals make up the mineral production in this County.

*County seats

Gold	\$	3,250
Silver		520
Uranium		
Beryllium		71,000
		<hr/>
Total	\$	74,770
Sand & Gravel		99,366
Peat		12,000
		<hr/>
Total	\$	111,366
TOTAL PRODUCTION FOR COUNTY.....	\$	186,136

PITKIN (3)

*Aspen

Area 975 square miles

Mine, plant, oil—52 men

Stripping and development operations at the Pitkin Iron Mine, located seven miles southeast of Ashcroft, continued through the summer months. This property, owned by the Pitkin Iron Corporation and operated by Morrison-Knudsen, Inc., produced in excess of 1,000 tons per day of iron ore and this selected ore was normally shipped to the Columbia-Geneva Steel Company in Utah. Improvements were made at Woody Creek by installing a conveyor across the Roaring Fork River for the purpose of expediting the loading operation. Plans were made during the year by the Colorado Aspen Mining Company to start a barite operation in the County.

Iron Ore	\$	72,787
Sand & Gravel	\$	56,742
TOTAL PRODUCTION FOR COUNTY.....	\$	129,529

PUEBLO (2)

*Pueblo

Area 2,414 square miles

Mines, plants, projects, oil—168 men

Uranium production from the Kathryn Mine, located on Turkey Creek 26 miles southeast of Colorado Springs, along with clay mined at the Nellie Ellen property, the General Refractory property at Stone City, the Chamblin property north of Mustang, and the Rock Creek property near Beulah, was steady during the year. Sand and gravel was produced by the

*County seats

Fountain Sand & Gravel Company and by the Certified Concrete Company as well as from other pits in the County. Considerable road construction this year added to employment in Pueblo County.

Uranium .....	.....
Sand & Gravel	\$ 326,389
Clay	61,407
Total	<hr/> \$ 387,796
TOTAL PRODUCTION FOR COUNTY.....	\$ 387,796

RIO BLANCO (3)

*Meeker

Area 3,264 square miles

Mines, projects, oil—657 men

Oil production from Rangely field in northwest Rio Blanco County again was first in Colorado. Gas injection and water flooding of the field were continued during the year and the average number of new wells were completed and worked over. Two gasoline plants were operated continuously in the County. Uranium mining operations were conducted at the Coal Creek No. 1 uranium mine by Devereaux Brothers and at the Midnight Mine by the J & H Mining Company. Several sand and gravel operations were active.

Uranium .....	.....
Vanadium .....	.....
Sand & Gravel	\$ 234,801
Petroleum	53,372,105
Gas Sold	974,181
Total	<hr/> \$ 54,346,286
TOTAL PRODUCTION FOR COUNTY.....	\$ 54,581,087

RIO GRANDE (3)

*Del Norte

Area 916 square miles

Mine, projects—20 men

Some development and exploration work was done at the Reynolds Mine in the Summitville area by John Riggs during

*County seats

the summer months. No other activity was reported from this County.

Miscellaneous	\$	2,000
Sand & Gravel	\$	10,335
TOTAL PRODUCTION FOR COUNTY.....	\$	12,335

ROUTT (3)

*Steamboat Springs

Area 2,331 square miles

Mines, quarry, projects, placer—111 men

The quarry operations of the McCoy Aggregate Company at their cinder pit, located seven miles north of McCoy, were active when weather permitted during the year. The Curtis, Sage, Tow Creek and Grass Creek fields maintained a steady petroleum production and a normal amount of petroleum and gas exploration drilling was noted. Highway construction added to employment in the County.

Gold	\$	420
Sand & Gravel		135,940
Scoria		51,248
Total	\$	187,188
Petroleum	\$	380,900
TOTAL PRODUCTION FOR COUNTY.....	\$	568,508

SAGUACHE (3 & 4)

*Saguache

Area 3,146 square miles

Mines, projects—135 men

Base metal activity in Saguache County continued dormant this year, however most of the mines and mills in the Bonanza area were maintained on a standby basis pending a more favorable operating atmosphere. Considerable uranium was produced by the Pinnacle Exploration Company in the Marshall Pass area prior to December and some production was noted from the Kerr-McGee properties which were purchased from the Gunnison Mining Company and which were closed in April of this year. The Gibraltar Mining Company, operating the Look-out uranium property northeast of Sargents, was active most of the year. Highway construction and surfacing on Colorado Highway 114, and sand and gravel operations as well as gem-

*County seats

stone mining in the Villa Grove area added to employment in the County.

Uranium	\$ 4,388,000
Sand & Gravel	111,258
Gemstones	10,000
Total	\$ 121,258
TOTAL PRODUCTION FOR COUNTY.....	\$ 4,509,258

SAN JUAN (4)

*Silverton

Area 392 square miles

Mines, plants, projects, placers—148 men

San Juan County showed the largest percentage increase in mineral production in the State during the year. With the starting of the Standard Mill (the old Shenandoah Dives Mill) in August, crude ore from the American Tunnel was concentrated and shipped to smelters out of state. For the past three years Standard Metals has been developing and improving access to the old Gold King and Sunnyside workings on Cement Creek which has culminated in a 700% county mineral production increase over 1961. The mill presently is operating on tonnage in excess of 500 tons per day which is trucked from the mine portal to the mill. Both the Washington vein and the Belle Creole vein have been developed through the old Gold King or American Tunnel. New stoping methods are being developed which will enable the company to operate on the presently low base metal prices. Work continued on the erection of a mill at the Richardson property, formerly the Brooklyn, east of Chattanooga and some crude production was noted. The Pride Mill at Howardsville operated for a time during the summer months. Several properties in San Juan County were opened and sampled during the year. This increased mining activity has materially helped employment in the County.

Gold	\$ 15,018
Silver	52,617
Copper	38,215
Lead	177,814
Zinc	307,200
Miscellaneous	1,350
Total	\$ 592,214
Sand & Gravel	\$ 17,951
TOTAL PRODUCTION FOR COUNTY.....	\$ 610,165

*County seats

SAN MIGUEL (4)

*Telluride

Area 1,284 square miles

Mines, plants, projects, oil—821 men

Although some lower than last year, San Miguel County maintained second place in uranium and vanadium production in the State. Most production came from the Slick Rock, Bull Canyon, Gypsum Valley and Egnar districts and this ore was treated at Uravan, Durango, Grand Junction and Naturita. Slight allotment cutbacks in uranium ore purchasing and the closing of the Atomic Energy Commission mines during the year were responsible for lower production. Operations at the Idarado Mining Company property in Ouray and San Miguel Counties remained steady during the year which resulted in this company's production of lead, copper and silver from their Pandora Mine being first in the State. Ores from veins in both counties were treated in the company's 1,000-ton per day mill located east of Telluride. With a rise in the silver price during the year many old, idle properties were examined for future operation. The San Miguel Drilling Company prospected for oil and gas in the drilling of their Federal No. 1 well in the western part of the County. Sand and gravel production was noted and this material was used for highway and building construction. Highway 145 was oiled from Telluride to the top of Lizard Head Pass.

Gold	\$ 618,334
Silver	564,567
Copper	1,444,662
Lead	1,294,534
Zinc	2,451,100
Uranium	5,146,176
Vanadium	1,771,645
Iron	98,000

Total	\$ 13,389,018
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Sand & Gravel	\$ 133,398
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TOTAL PRODUCTION FOR COUNTY.....	\$ 13,522,416
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SUMMIT (3)

*Breckenridge

Area 616 square miles

Mines, plant, projects, placer—382 men

All excavation, tunnel lining and surface construction work was completed at the Harold D. Roberts Tunnel early in 1962 and the finished project was turned over to the Denver Water

*County seats

Board by the Blue River Constructors, Inc., the prime contractors on the project. Work continued on the Dillon Dam by the Potashnick Construction Company and the dam was nearly two-thirds completed by the end of 1962. Completion is expected late in 1963. The Consolidated Parnett Corporation continued development work on the Wellington Mine and at the end of the year were installing a new mill to replace their mill and surface plant which were destroyed by fire on August 29. This operation expects to get into production early in 1963. Several placers along the Blue River were active during the year and C. Ryan & Son operated their gravel plants for the Climax Molybdenum Company near Kokomo.

Gold	\$	2,260
Silver		3,200
		<hr/>
Total	\$	5,460
Sand & Gravel	\$	336,025
TOTAL PRODUCTION FOR COUNTY.....	\$	341,485

TELLER (2)

*Cripple Creek

Area 555 square miles

Mines, plant, quarries, placer—106 men

With the closing of the Golden Cycle mining properties and the Carlton Mill early in 1962, gold production in Teller County was stopped for the first time since its discovery in 1891. The fixed price of gold at \$35.00 per ounce and increased labor, material and supply costs has made it almost impossible to mine and produce gold in Colorado. The closing of the Cripple Creek-Victor District marks the closing of Colorado's last gold camp. The peak gold production of Teller County in any one year occurred in 1900 when \$18,147,681 worth of gold was produced. In 1961 gold production was \$1,183,549 and the accumulated production of gold from this County up to and including 1961 was \$379,047,793. At the end of 1962 only the Molly Kathleen and the El Paso Mines were open for the tourist trade. Some peat and stone were mined and quarried during the year.

Sand & Gravel	\$	3,000
Stone		24,300
Peat		32,000
		<hr/>
Total	\$	59,300
TOTAL PRODUCTION FOR COUNTY.....	\$	59,300

*County seats

WASHINGTON (1)

*Akron

Area 2,530 square miles

Projects, oil—440 men

Several new wells were completed in the eastern and southern sections of the County which should bring more interest and drilling into this area during 1963. Some clay was mined in the Akron area and hauled into Denver by the Denver Brick & Pipe Company for testing.

Sand & Gravel	\$ 207,045
Petroleum	25,865,027
Gas Sold	388,585
Total	\$ 26,253,612
TOTAL PRODUCTION FOR COUNTY.....	\$ 26,460,657

WELD (1)

*Greeley

Area 4,033 square miles

Plants, projects, oil—154 men

Renewed interest was given the Rogden area and several wells were put into production during the year. The northern part of the County also enjoyed some new activity and some wells were brought in that should encourage more wildcat drilling. Sand and gravel production was steady.

Sand & Gravel	\$ 1,017,616
Petroleum	4,987,011
Gas Sold	264,915
Total	\$ 5,251,926
TOTAL PRODUCTION FOR COUNTY.....	\$ 6,269,542

*County seats

Safety Awards

Safety Achievement Awards were issued to the Fibreboard Paper Products Company's Quarry & Crushing Plant, the Portland Quarry & Crushing Plant operated by Ideal Cement Company, and to the Union Carbide Nuclear Company for their Maybell Mining Operations. These awards are presented to those operators who achieve a minimum of 1,000,000 man-hours or five years worked without a lost-time injury.

Safety awards have been issued to the following operators who have completed the year 1962 without a lost-time injury and who have exceeded 30,000 man-hours of employment during the year:

American Smelting & Refining Company—Globe Plant
 Castle Concrete Company—Castle Quarry & Crushing Plant
 Oral Clark—Plateau Operations
 Douglas Cleghorn—Plateau Operations
 Cotter Corporation—Cotter Mill
 Davis Drilling Company—Rig No. 1, Colorado Operations
 W. B. Eckman—Deer Shaft
 Gardner Construction Company—Colorado Projects
 General Chemical Division, Allied Chemical Corporation—Burlington Mine
 General Chemical Division, Allied Chemical Corporation—Valmont Plant
 Ideal Cement Company—Boettcher Quarry & Crushing Plant
 Morrison-Knudsen Company, Inc.—Pitkin Iron Mine & Crusher
 Mountain Fuel Supply Company—Hiawatha Oil Field
 Mountain Fuel Supply Company—Powder Wash Oil Field
 Nielson, Inc.—Colorado Projects
 Schmidt Construction Company—Colorado Projects
 Texaco Inc.—Wilson Creek Oil Field
 Union Carbide Nuclear Company—Capella Mine
 Union Carbide Nuclear Company—Deremo Mine
 Union Carbide Nuclear Company—Paradox D Mine
 Union Carbide Nuclear Company—Uravan Mining Department

Awards of Merit have been issued to the following operators, some of which had no lost-time injuries during the year but had insufficient man-hours to qualify for a Safety Award. This award is given to large and small operators alike in appreciation of outstanding effort and cooperation in the field of Safety during the year.

Don Andrews—Picket Corral Mine
 Baker Well Service—Colorado Operations

Levi B. Barnes—Bill Batey Mine
G. C. Bennetts & Son—Clay Mining Operations
Delbert Burlbridge—Plateau Operations
The California Company—Ault Division
The California Company—Oil & Gasoline Plant
Camay Drilling Company—Colorado Operations
Carmack Drilling Company—Colorado Operations
Cenpac Mining Company—La Sal Mine
Colonna & Company of Colorado, Inc.—Canon City Quar-
ries
Colorado Aggregate, Inc.—Mesita Hill Quarry & Crushing
Plant
Colorado Fuel & Iron Company—Monarch Quarry
Colorado Lime Company—Lennox Breed Quarry & Crush-
ing Plant
Colorado Well Service, Inc.—Colorado Operations
Wesley D. Conda—Clay Mining Operations
C. H. Corey, Jr.—Strawberry Roan Mine
Cowan Brothers—Cowan Brothers Quarry
Denver Brick & Pipe Company—Clay Mining Operations
Denver Fire Clay Company—North Golden Mine
Dulaney Mining Company—Radium No. 7 Mine
Emperius Mining Company—Mine & Mill
Empire Clay Products—Pits Nos. 1, 2, 3, 4
Ralph Foster & Sons—Mesa No. 8 Mine
Roy Franklin—Plateau Operations
Harry Harp—Midnight Mine
Herren & Strong Company, Inc.—Colorado Operations
Idarado Mining Company—Mine & Mill
William R. Irvin—I&E Mine
E. J. Johannsen—Plateau Operations
Jones & Jones—Rim Rock No. 5 Mine
Domenic Leone Construction Company, Inc.—Colorado
Operations
Alex Lockhart & Sons—Mica Lode Quarry
Meade Drilling Company—Colorado Operations
Moran Brothers, Inc.—Colorado Operations
Ernest W. Munroe—Goodwin Quarry & Plant
Neilson & Klingensmith—Plateau Operations
New Jersey Zinc Company—Eagle Mine
New Jersey Zinc Company—New Jersey Zinc Plant
Albert Nickerson—Plateau Operations
George W. Parfet Estate, Inc.—Clay Mining Operations
Peacock Well Service—Colorado Operations
Persolite Products, Inc.—Rosita Pit & Crushing Plant
Pikes Peak Granite Company—Pikes Peak Quarry
Polar Mesa Mining Company—Plateau Operations
Potashnick Construction Company—Blue River Projects
R&R Well Service—Colorado Operations
LaVerne Ray—Plateau Operations

Rio Grande Gravel Company—Jefferson County Plant & Pit
Robinson Brick & Tile Company—Douglas & Jefferson County Mines
Rock Products, Inc.—Rock Products Crushing Plant
C. Ryan & Son Construction Company—Colorado Operations
C. C. Sanders—Plateau Operations
DeVar Shumway—Plateau Operations
Standard Fire Brick Company—Rock Creek & Chamblin Mines
Sterling Sand & Gravel Company—Fort Collins Sand & Gravel Plant
Stroud-Whisenhunt—Boulder & Douglas County Clay Mines
Transit Mix Concrete Company—Sand Pits & Screening Plants
Marion Trone—Plateau Operations
Union Carbide Nuclear Company—Eula Belle Mine
Union Carbide Nuclear Company—Maybell Mill
Union Carbide Nuclear Company—Rigel Mine
U. S. Beryllium Corporation—Boomer Mine
U. S. Soil Conditioning Corporation—Thunder Mountain Quarry
United States Gypsum Company—Loveland Works
Utex Exploration Company—Cash & Rex Mines
Valley Concrete Company—Lamar Sand Pit & Screening Plant
Lark Washburn—Plateau Operations
Wellington Mine Association—Wellington Mine
Western Feldspar Milling Company—Western Feldspar Mill
Grover Williams—Trace Elements Pits

Injuries

Total lost-time injuries in the mineral industry, exclusive of coal mining, in 1962 were 198 less than in 1961 or a 22% overall reduction. Man-hours of exposure in 1962 were 364,800 less than in 1961 or a decline of less than one percent. The 1962 overall frequency rate was 20.3 or 5.2 less than the previous year. The 1962 overall severity rate was 1,671 or 1,073 less than the previous year. Nine fatal injuries occurred in 1962 which was two less than in 1961. Five of these fatalities occurred in underground mining and one each in a milling operation, oil well drilling operation, quarry operation and a highway project. This figure is five less than the ten year average of 14 fatalities per year. Although a slight reduction in man-hours worked had some influence on the above remarkable improvement, continued efforts towards a safe operation by the employer, employee and Bureau of Mines inspectors were largely responsible for this continuing improvement.

Fall of rock was responsible for the greatest number of non-fatal injuries in 1962 while transportation equipment was responsible for three of the nine fatalities and second in cause of non-fatal injuries. One fatality occurred for every 838 men working underground or one for every 1,803,380 man-hours worked. One fatality occurred for every 3,499 men working in plants or one for every 7,680,000 man-hours worked. One fatality occurred for every 327 men working in quarries or one for every 996,000 man-hours worked. One fatality occurred for every 3,101 men working on projects or one for every 7,442,400 man-hours. One fatality occurred for every 3,472 men working in the oil well drilling industry, or one for every 7,929,200 man-hours worked. One lost-time injury occurred for every 21 men working in the entire industry or one for each 49,069 man-hours worked.

All of the above fatal accidents were promptly investigated by Bureau of Mines inspectors as were all injuries considered of a serious nature. Complete reports covering these accidents and injuries were filed in the Bureau of Mines office by the inspectors and pertinent information as to the cause of these injuries was distributed to all inspectors immediately. Corrective recommendations were left with the operator and all similar situations in the State were corrected.

Specific cause, type, nature and site of all lost-time injuries are listed in the following table as are the location and number of injuries by district and operation.

SUMMARY OF INJURIES

	Total Man-Hours	Fatal Injuries	Lost-Time Injuries	Number of Days Lost	Frequency Rate Per One Million Man-Hours	Severity Rate Per One Million Man-Hours
Mines, Underground	9,016,800	5	364	37,354	40.3	4,142.
Mines, Surface	3,139,200	0	69	1,087	21.9	346.
Quarries—Pits	996,000	1	16	6,101	16.0	6,125.
Mills—Plants—Smelters	7,680,000	1	90	7,127	11.7	927.
State & Federal Projects	7,442,400	1	86	7,747	11.5	1,040.
Oil & Gas Industry	7,939,200	1	113	1,106	14.2	139.
Totals	36,213,600	9	738	60,522	20.3	1,671.

This table includes the loss of 54,000 days due to 9 fatalities and 1,875 days due to 6 permanent partial disabilities.

Frequency Rate=	Severity Rate=	Total Time Charges in Days × 1,000,000
Number of Injuries × 1,000,000	Number of Man-Hours of Exposure	Number of Man-Hours of Exposure

INJURIES BY DISTRICTS

	Fatals	Mines, Underground	Mines, Surface	Quarries— Pits	Mills—Plants— Smelters	Projects	Oil Wells	Totals
District 1.....	1	9	8	8	15	19	42	101
District 2.....	1	8	3	6	7	29	4	57
District 3.....	4	133	24	2	23	11	42	235
District 4.....	3	214	34	0	45	27	25	345
Totals.....	9	364	69	16	90	86	113	738

FATAL INJURIES

Date	Name	Age	Employed by	County	Cause of Injury
1-24-62	Ted Leo Lujan	36	Mines, Underground The New Jersey Zinc Company	Eagle	While replacing a cap blown out by a prior blast, the cap slipped out knocking Lujan down and he fell 6 sets, causing his death. Improper safeguards.

Date	Name	Age	Employed by	County	Cause of Injury
4-5-62	Lonzo Haskel Yardley	41	Cole and Bond Mining Company	Montrose	Yardley backed his shuttle car into a stub drift and under a loose slab which fell, hitting him on the head and causing instant death. Lack of ground support.
6-24-62	Clement A. Clark	43	American Metals Climax, Inc.	Lake	Clark was placing a bomb in a finger raise to blast a hangup when the hangup released, causing injuries which resulted in death. Incorrect evaluation of hangup.
7-27-62	Raymond Begay	31	Union Carbide Nuclear Company	San Miguel	Begay backed his shuttle car into drift to turn around and in so doing crushed his chest between a four foot high 8 x 8 timber and the steering wheel, causing instant death. Carelessness. Improper safeguards.
10-29-62	Leo A. Bartell	34	American Metals Climax, Inc.	Lake	Bartell, a mine foreman, was in the act of opening a four inch valve when a section of four inch plastic pipe failed, causing valve to swing and hitting him in the head. Inflicted injuries caused death 10-31-62. Equipment failure.
8-3-62	John Zeilinger	53	Climax Uranium Company	Mesa	Zeilinger, a mill operator, contacted a metal pole which was in contact with a 440-volt line. Electrocution. Improper electrical installation.
9-5-62	Thomas J. Astle	51	Moab Drilling Company	Garfield	Standing on a 134-foot section of conveyor frame during installation when the frame collapsed, causing Astle to fall 25 feet and resulting in death. Insufficient support and carelessness.

Mills

Quarries

Date	Name	Age	Employed by	County	Cause of Injury
12-10-62	Forest A. Twite	45	Siegrist Construction Company	Conejos	Driving empty International Harvester Payscraper on rough terrain with blade raised high. Scraper overturned crushing Twite and causing death. Failure to use proper safety precautions.
4-18-62	Edward Ernest Leirer, Jr.	21	Allison Drilling Company, Inc.	Washington	Leirer was standing on the rig floor next to 74 double stands of drill pipe when a guyline deadman failed, allowing derrick to fall over. Leirer was crushed by falling drill stem. Improper deadman installation.

Oil Wells

LOST TIME INJURY STATISTICS—MINERAL INDUSTRY (Continued)

TYPE OF INJURY (I = Injuries; F = Fatalities)	Mines		Surface		Mills-Plants- Smelters		Quarries		Projects		Oil Wells		Grand Totals	
	I	F	I	F	I	F	I	F	I	F	I	F	I	F
Burns-Shock	3		2		9	1	1		4		4		23	1
Caught in or between	51	1	2		11				11		20		95	1
Fall on Same Level	15		3		8		1		2		3		32	
Fall on Different Level	8	1	3		3			1	5		9		28	2
Handling	105		31		34		6		22		19		217	
Inhalation-Suffocation	3				3				3				9	
Slip-Stepping on	26		12		9		2		8		8		65	
Striking against-Struck by	148	3	16		15		5		30	1	49	1	263	5
Unclassified-Insufficient Data	1												1	
Totals	360	5	69		92	1	15	1	85	1	112	1	733	9
NATURE OF INJURY														
Amputations	7								2		1		10	
Burns-Scalds-Shock	5		3		9	1	1		6		4		28	1
Cuts-Bruises-Lacerations-Punctures	178		25		29		6		37		55		330	
Foreign Bodies	19		3		3		1		3		2		31	
Fractures	66	4	11		11		1	1	17	1	30	1	136	7
Hernia	6	1	4		3		1		2		1		17	1
Occupational Diseases					1								1	
Respiratory	2				3				2				7	
Strains-Sprains-Dislocations	110		29		39		6		29		27		240	
Nature Unknown	1				1				1		2		5	
Totals	394	5	75		99	1	16	1	99	1	122	1	805	9
SITE OF INJURY														
Eyes	21		4		7		1		8		5		46	
Head-Face-Neck	39		6		10				11		14		81	2
Trunk	127	3	25		41		6	1	34		33	1	266	5
Upper Extremities	97		12		18		1		18		33		179	
Lower Extremities	129		24		22		5		32		35		247	
General	6		2			1	1			1			9	2
Unclassified-Insufficient Data	1				1						1		3	
Totals	420	5	73		99	1	15	1	103	1	121	1	831	9

Men Employed

A slight decrease in mineral industry employment was noted in 1962 for the first time since 1958. This decrease occurred in the employment of underground miners, mill men and quarry men. An increase in employment of oil workers and project workers was not sufficient to overcome the loss of employment in mining and milling. Despite the fact that many Atomic Energy Commission leases were terminated in 1961, the loss of only 147 men in the industry indicated that those men affected immediately secured employment in other phases of the industry. Generally speaking, employees in the mineral industry will become self-employed or will secure a private lease when employment slacks off and this procedure maintains a fairly steady number of men working in the industry. In addition to the cancellation of Atomic Energy Commission leases, the Golden Cycle Mill and Mines in Teller County suspended operations which affected some 200 employees.

	Mines		Mills, Plants, Smelters		Quarries & Pits		Placers		Projects		Oil Wells		Totals	
	No.	Men	No.	Men	No.	Men	No.	Men	No.	Men	No.	Men	No.	Men
District 1	54	435		544	34	147	25	63		592		1,535		3,316
District 2	28	128	16	196	23	106	3	9		933		335		1,707
District 3	22	2,016	15	1,399	10	6	3	6		623		980		5,084
District 4	331	2,486	25	1,360	3	14	2	10		953		622		5,445
Totals	479	5,065	99	3,499	70	327	33	88		3,101		3,472		15,552

TOTAL MEN EMPLOYED

	Underground	Surface	Oil Wells	Totals
District 1	291	1,490	1,535	3,316
District 2	443	929	335	1,707
District 3	1,504	2,600	980	5,084
District 4	1,953	2,870	622	5,445
Totals	4,191	7,889	3,472	15,552

MEN EMPLOYED IN

Gold, Silver, Copper, Lead, Zinc 990	Molybdenum 2,280	Uranium 5,000	Petroleum 3,472
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DIVISION OF OPERATIONS

Base and Precious Metal Mines	62
Uranium Mines	401
Other Mining, Drilling, Quarrying & Project Operations	451

FIRST AID TRAINING

During the year first aid training was given by the Colorado Bureau of Mines inspectors to 176 men in Colorado's mineral industry. The standard United States Bureau of Mines training course was used.

MINERAL SPECIMEN COLLECTIONS

One thousand and one separate small mineral collections were mailed out to students and other persons interested in Colorado minerals.

Inspections

Of the 1,486 inspections made during the year, 914 represented inspections made on as many separate operations. This included oil wells, projects, quarries, plants and mines. Each operation was inspected for safety at least once during the year and those that required extra safety supervision were inspected several times. Inspections listed below were made primarily for general compliance with Colorado's safety rules and do not include specific inspections made for the control of radiation hazards in uranium mines. Some large properties required several days for one inspection while, on the other hand, several small properties were inspected in a single day.

INSPECTIONS

Made By

1962	District 1 Blake	District 2 Keating	District 3 Doyle	District 4 Ray & Pakka	Total
January	32	15	22	63	132
February	14	16	12	38	80
March	34	27	21	70	152
April	26	23	21	52	122
May	36	45	16	57	154
June	34	13	28	51	126
July	5	16	40	59	120
August	31	19	6	38	94
September	21	23	21	66	131
October	43	22	18	70	153
November	34	25	22	62	143
December	22	13	....	44	79
Totals	332	257	227	670	1,486

	Mines	Mills, Plants, Smel- ters	Pits & Quarries	Placers & Bogs	Oil & Gas Wells, Plants	Projects			Total
						Road	Tunnel	Dam	
District 1....	92	50	75	7	91	15	1	1	332
District 2....	60	37	89	1	31	23	9	7	257
District 3....	95	40	17	3	51	9	4	8	227
District 4....	506	46	5	....	40	32	21	20	670
Totals	753	173	186	11	213	79	35	36	1,486

Information Reports

In order to maintain a progressive record of the operations of each mine in the State, the district inspector submits an Information Report on the individual mine some time during the year. Where operations have not materially changed since the last report, only vital information such as labor and production is listed. These Information Reports give the correct property location, method of timbering, ground condition and a description of the underground workings. Their use is invaluable in determining the possible condition of mines that have been inactive for several years.

INFORMATION REPORTS

Made By

1962	District 1 Blake	District 2 Keating	District 3 Doyle	District 4 Ray & Pakka	Total
January	8	3	....	38	49
February	1	....	....	15	16
March	3	....	....	63	66
April .....	....	....	....	33	33
May	5	4	....	26	35
June	15	7	8	31	61
July	7	3	3	36	49
August	25	17	....	7	49
September	17	10	....	42	69
October	6	4	....	53	63
November	10	4	....	38	52
December	39	5	35	27	106
Totals	136	57	46	409	648

	Mines	Mills, Plants, Smelters	Pits & Quarries	Placers & Bogs	Oil & Gas Wells, Plants	Projects			Total
						Road	Tunnel	Dam	
District 1....	48	18	42	26	2	....	....	....	136
District 2....	23	6	23	2	3	....	....	....	57
District 3....	16	11	10	3	2	....	1	3	46
District 4....	367	19	3	3	3	6	3	5	409
Totals	454	54	78	34	10	6	4	8	648

Radon Daughter Control

The following illustrative tables and Radon Control statistics are supplemental to the Radon Daughter Control report in the front part of this 1962 Annual Report. The comparative figures illustrate the progress made in a year and a half of concentrated effort to reduce the radiation hazard in our Colorado uranium mines. They also illustrate that with the continual opening and closing of individual mines constant monitoring is required to keep radiation levels within tolerance.

1962

Number of Mines Sampled for Radon Daughter Products..	917
Number of Separate Mines Sampled.....	331
Number of Individual Samples Taken.....	2,705
Number of Men Catalogued for Exposure.....	3,003

STATUS OF MINES DECEMBER 31, 1962

(1 WL Represents 300 Micromicrocuries per Liter of Air)

Range	Number of Mines	Per Cent	Cumulative Per Cent
1.0 WL or less	108	52%	52%
1.0 WL to 3.0 WL	79	38%	90%
3.0 WL to 10.0 WL	22	10%	100%
10. WL and over	0	0%	0%
Total	209	100%	

A comparison of progress in radiation control in Colorado uranium mines is listed in the following table:

	Per Cent of Operating Mines		
	June 30, 1961	Dec. 31, 1961	Dec. 31, 1962
1.0 WL or less	18%	45%	52%
1.0 WL to 3.0 WL	14%	27%	38%
3.0 WL to 10.0 WL	29%	23%	10%
10. WL and over	39%	5%	0%
Total	100%	100%	100%

INDIVIDUAL SAMPLE AND INSPECTION STATISTICS

Samples Taken by	Number of Samples	Number of Inspections
Thomas High	1,005	327
William Horn	799	289
Calvin Warnica	901	301

CORRECTIVE ORDERS ISSUED FOR VENTILATION

General	126
Removal of Men from Area.....	11
Compliance by Specified Date.....	4

Mineral Operations by County in Colorado

Name of Property	Location	Operator's Name & Address	Product	Kind of Property
ADAMS COUNTY				
Inland.....	Derby.....	Boise Cascade Sand & Gravel Co., 7620 Madison St., Derby	Sand, Gravel, Gold	Plant
Mill at Pit No. 8.....	Denver.....	Brannan Sand & Gravel Co., 4800 Brighton Blvd., Denver	Sand, Gravel, Gold	Plant
Mill at Pit R.....	Denver.....	Cooley Gravel Co., 6101 Lowell Blvd., Denver	Sand, Gravel, Gold	Plant
North Plant.....	Denver.....	Cooley Gravel Co., 6101 Lowell Blvd., Denver	Sand, Gravel, Gold	Plant
ARAPAHOE COUNTY				
Englewood Plant.....	Englewood.....	Cooley Gravel Co., 6101 Lowell Blvd., Denver	Sand, Gravel	Plant
Littleton Plant.....	Littleton.....	Cooley Gravel Co., 6101 Lowell Blvd., Denver	Sand, Gravel	Plant
BOULDER COUNTY				
Bakers Nos. 1-10.....	Lyons.....	Pyramid Stone Co., 6071 W. 48th Ave., Wheatridge	Stone	Quarry
		Joseph Puckett, c/o Joe Baker, Rt. 3, Longmont	Peat	Peat Bog
		Taylor Brothers, Box 353, Lyons	Gold, Silver, Copper, Lead	Mine
		Jay Morgan, Lyons	Sand, Gravel, Gold	Plant
		Willard Trevarton, Lyons	Stone	Quarry
		Baker Stone Company, Lyons	Fluorspar	Mine
Beaver Lake.....	Beaver Dam Lake.....	Beaver Lake Peat Co., 2902 6th St., Boulder	Peat	Peat Bog
Blue Bird.....	Grand Island.....	Ruehlman Mining & Land Co., 1941 Tyler Rd., Boulder	Gold, Silver, Copper, Lead	Mine
Boulder Gravel Products.....	Valmont.....	Boulder Gravel Products, Inc., Box 229, Boulder	Sand, Gravel, Gold	Plant
Brodies St. Vrain.....	Lyons.....	Sterling Stone Quarries, Box 58, Lyons	Stone	Quarry
Burlington.....	Jamestown.....	Allied Chemical Corp., General Chem- ical Division, Box 228, Boulder	Fluorspar	Mine
Caribou.....	Caribou.....	Centennial Peat Moss, Box 420, Boulder	Peat	Peat Bog
Cash.....	Gold Hill.....	Utex Exploration Co., Moab, Utah	Gold	Mine
Dodge.....	Sugar Loaf Road.....	Edward Oler, 3017 Stuart St., Denver	Silver	Mine
Eldorado Pit Nos. 1 & 2.....	Eldorado Springs.....	Eldorado Clay Co., Rt. 1, Box 759, Golden	Clay	Mine

BOULDER COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Green Thumb	Nederland	Caribou Ranch Corporation, Nederland	Peat	Peat Bog
Harms	Ward	W. F. Harms, Rt. 2, Box 75A, Boulder	Peat	Peat Bog
Hiel	Jamestown Road	Bud King Construction Co., Box 86, Lyons	Rip Rap	Quarry
Ingersoll	Jamestown Road	University of Colorado, Boulder	Stone	Quarry
Jacobson & Lyons	Beach Hill	Jacobson & Lyons Stone Co., Inc., Box C, Lyons	Stone	Quarry
Jenkins	S. E. of Boulder	Stroud-Whisenhunt, 520 Anderson St., Castle Rock	Clay	Mine
King Mountain	Lyons	King Mountain Rock Co., Box 1189, Boulder	Crushed Stone	Quarry & Plant
Loukonen Brothers Quarries	Beach Hill	Loukonen Brothers Stone Co., Box 865, Lyons	Stone	Quarry
Marion	Sugar Loaf Road	Earl G. Sweeney, Box 441, Boulder	Fungsten, Tin, Rare Earth	Mill
McCall Quarries	Steamboat Mtn.	Dale Hotchkiss, Box 364, Lyons. Walter A. Pickering, c/o Mabel Landau, Lyons	Stone	Quarry
Nations Treasure	Jamestown	James Pastore et al, 1946 Walnut St., Boulder	Fluorspar	Mine
Noland	Beach Hill Road	Sterling Stone Quarries, Box 124, Lyons	Stone	Quarry
Occidental	Ward	Colorado Minerals, Inc., Box 43, Boulder	Gold, Silver, Copper, Lead	Mine
Rex	Summerville	Utex Exploration Co., Moab, Utah	Gold, Silver	Mine
Tungsten (18225A)	Nederland	Tungsten Mining Co., 420 Pine St., Boulder	Tungsten	Mine
Valmont Plant	Valmont	Allied Chemical Corp., General Chemical Division, Box 228, Boulder	Fluorspar	Mine
Wano	Jamestown	Williamson Mining Co, Jamestown	Gold	Mine
Washington Irving	Glendale	Colard & Dittberner, Ward Star Rt., Jamestown	Gold	Mine

CHAFFEE COUNTY

Colorado Granite Grit	Salida	Colorado Granite Grit Corp., Box 426, Salida	Granite Grits	Plant
Crystal Quarry	Ute Trail	Colorado Granite Grit Corp., Box 426, Salida	Granite	Quarry
Homestake	Ute Trail	M & S, Inc., Box 671, Salida	Feldspar	Quarry

CHAFFEE COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Monarch Lime Quarry	Monarch Pass	Colorado Fuel & Iron Corp., Box 316, Pueblo	Limestone	Quarry
Shannon Last Chance	Chalk Creek	Colorado Granite Grit Corp., Box 426, Salida	Granite	Quarry
Stonewall	St. Elmo	Harry Nylene, Leadville	Silver, Lead, Zinc	Mine
Western Feldspar Mill	Salida	Western Feldspar Milling Co., Box 671, Salida	Feldspar	Mill

CLEAR CREEK COUNTY

Alma Lincoln	Spanish Bar	Alma Lincoln Mine, Box 781, Idaho Springs	Tourist	Mine
American Sisters No. 1	Lawson	David Edwards, Box 383, Breckenridge	Silver, Lead	Mine
Booth & Smith	Georgetown	Booth Sand & Gravel Co., Lawson	Sand, Gravel	Plant
Burleigh	Silver Plume	Walcott & Zorn, Box 552, Georgetown	Lead, Zinc	Mine
Cascade (Hall Tunnel)	Ute Creek	Humphreys Engineering Co., 910 Denver	Silver, Lead, Zinc	Mine
Centennial Mining Placer	Fall River	C. J., C. R., & E. A. Carlson, 1625 Cheyenne Blvd., Colorado Springs	Gold	Placer
Dixie	Ute Creek	Idaho Springs Milling Co., c/o A. E. Burns, Wilson, Kansas	Gold, Silver	Mill
Drummond	Lawson	Alva Garrett & Associates, 4612 S. Bannock St., Englewood	Gold, Silver	Mine
Elida Tunnel (Jo Reynolds)	Lawson	Drummond Mines, c/o J. B. Traynor, 512 Skyline Drive, Fort Collins	Rehabilitation	Mine
Forge Hill	Virginia Canyon	Jo Reynolds Mining, Milling, Drainage Tunnel & Transportation Co., c/o Colorado School of Mines, Golden	Gold, Silver, Copper, Lead	Mine
Franklin	Gilson Gulch	C. E. Morrison, Rt. 3, Box 367, Golden	Lead, Zinc	Mine
Free American Extension No. 1	Lawson	Franklin Silver Age Mining Co., Wilson, Kansas	Gold	Placer
Gold Dirt Group	Empire	Yukon-London, Inc., 3868 Estes St., Wheatridge	Lead, Zinc	Mine
Grover	Beaver Brook Canyon	Carl Abrahamson, Lawson	Lead, Zinc	Mine
Hammil Tunnel	Wide Awake Gulch	Kerr-McGee Oil Industries, Farmers Union Bldg., Denver	Lead, Zinc	Drilling
		Joe Grover Mining Co., Evergreen	Beryl, Rare Earths	Mine
		P & M Mining Co., 450 S. Broadway, Denver	Gold, Silver, Lead, Zinc	Mine

CLEAR CREEK COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Humbolt No. 3	Ute Creek	R. E. Mackey, 15 S. Yukon St., Lakewood	Gold, Silver	Mine
Independence Tunnel	Empire	Betty Anne Moore, Box 236, Empire	Lead, Zinc	Mine
Johnny Bull	Silver Plume	Globe Hill Mining Co., 5365 W. 3rd Place, Denver	Silver, Lead, Zinc	Mine
King Cyrus Nos. 1, 2	Spanish Bar	Lyle B. McNulty, 7505 Clay St., Westminster	Tourist	Mine
Lombard	Cumberland Gulch	U. S. Minerals Corp., 19 Rector St., New York City	Lead, Zinc	Mine
Mackey	Freeland	R. E. Mackey, 15 S. Yukon St., Lakewood	Lead, Zinc Concentrates	Mill
Mendota	Silver Plume	Ray Church, Box 425, Olathe	Lead, Zinc Concentrates	Mill
Miami & Edgar Tunnel	Dry Gulch	Colorado School of Mines, Golden	Instruction	Mine
Mill Creek	Dumont	Superior Acceptance Corp., 5365 W. 3rd Place, Denver	Lead, Zinc Concentrates	Mill
Poor John Adit	Idaho Springs	Bee Vee Mines, Box 135, Rollinsville	Gold, Silver	Mine
Quickie Iron Mine	Beaver Brook Canyon	Haef Leavitt & Associates, Box 822, Idaho Springs	Iron	Mine
Sante Fe	Gilson Gulch	Lancy Lubliner Mining Co., 812 Emporia St., Aurora	Gold, Silver	Mine
Saums	Lawson	Consolidated Copper, Inc., Mining Exchange Bldg., Denver	Gold	Placer
Silver King	Silver Plume	Silver King Mines, Inc., Box 66, Idaho Springs	Tourist	Mine
Silver Spruce	Idaho Springs	Humphreys Engineering Co., 910 American National Bank Bldg., Denver	Gold, Silver Concentrates	Mill
Urad	Woods Creek	C. Ryan & Sons, 6001 McIntyre St., Golden	Molybdenum	Mine
CONEJOS COUNTY				
Antonito Plant	Antonito	Great Lakes Carbon Corp., Mining & Minerals Products Division, Box 308, Antonito	Perlite	Plant
Mesita Hill	Mesita	Colorado Aggregate, Inc., Mesita	Volcanic Scoria	Quarry & Plant
COSTILLA COUNTY				
CUSTER COUNTY				
Buckeye-Holt	Ophir Creek	Eisenhour & Decker, Wetmore	Gold, Silver	Mine
Copper Reef	Silver Cliff	Jack Best, Box 333, Silver Cliff	Silver, Lead	Mine

CUSTER COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Lawson	Westmore	Elmore Glen, 1222 S. First St., Canon City	Clay	Mine
Ponderosa	Westcliffe	Insuplast Inc., Box 146, Canon City	Vermiculite	Mine & Plant
Rosita Quarry	Rosita	Persolite Products, Inc., Box 105, Florence		
		George Wolfe, 916 E. 2nd St., Florence	Perlite	Quarry
Tomboy	Ophir Creek	Charles & Lyman Akin, Wetmore	Gold, Silver	Mine

DENVER COUNTY

Denver Works	Denver	Allied Chemical Corp., General Chemical Division, Box 4040, South Denver Station, Denver	Sulphuric Acid, Aluminum Sulfate	Plant
Globe Plant	Globeville	American Smelting & Refining Co., 495 E. 51st St., Denver	Cadmium	Plant

DELTA COUNTY

Chipeta Mill	Delta	Chipeta Mining Co., Box 571, Delta	Gypsum	Mill
Crawford Dam-Smith Fork	Crawford	Bud King Construction Co., Crawford		Dam
Kissner Drilling Co.	Four Corners Area	Kissner Drilling Co., Cedaredge		Drilling

DOLORES COUNTY

Fritz & Erickson Drilling Co.		Fritz & Erickson Drilling Co., Box 365, Dove Creek		Drilling and Contract Mining
Mountain Springs	Rico	Rico Argentine Mining Co., Rico	Gold, Silver, Copper, Lead, Zinc, Iron	Mine
Ramco Acid Plant	Rico	Rico Argentine Mining Co., Rico	Sulphuric Acid	Plant
Rico Mill	Rico	Rico Argentine Mining Co., Rico	Gold, Silver, Copper, Lead, Zinc, Iron	Mill
Rosebud	John Bull Gulch	Bull Draw Mining Co., Telluride	Silver	Mine
St. Louis & Blaine	Rico	Rico Argentine Mining Co., Rico	Gold, Silver, Copper, Lead, Zinc, Iron	Mine
St. Louis & Iron Clad	Rico	Expectation Mining Co., Box 86, Rico	Gold, Silver, Lead	Mine

DOUGLAS COUNTY

Helmer Bros. Mine & Plant	Waterton	Helmer Bros., Rt. 1, Box 94, Littleton	Silica Sand, Limestone	Mine & Plant
Hogback Nos. 2 & 3	Waterton	Robinson Brick & Tile Co., 500 S. Santa Fe Dr., Denver	Clay	Mine

DOUGLAS COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Pioneer	Parker	Robinson Brick & Tile Co., 500 S. Santa Fe Dr., Denver	Clay	Mine
Ringenberg	Waterton	Denver Brick & Pipe Co., Box 2329, Denver	Clay	Mine
Stevens Ranch	Castle Rock	Stroud-Whisenhunt, 520 Anderson St., Castle Rock	Clay	Mine
Stroh	Parker	Stroud-Whisenhunt, 520 Anderson St., Castle Rock	Clay	Mine
Waterton	Waterton	Waterton Sand & Clay, 5953 S. Rapp St., Littleton	Clay, Sand, Limestone	Plant

EAGLE COUNTY

Dotsero	Dotsero	Lava Products, Inc., Box 390, Glenwood Springs	Volcanic Ash	Quarry
Eagle Mine & Mill	Gilman	New Jersey Zinc Co., Gilman	Silver, Copper, Lead, Zinc	Mine & Mill
Frying Pan-Arkansas Project	Basalt	U.S. Bureau of Reclamation, Region 7, Denver		Project

ELBERT COUNTY

Buffalo	Kiowa	Robinson Brick & Tile Co., 500 S. Santa Fe Dr., Denver	Clay	Mine
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EL PASO COUNTY

Castle	Colorado Springs	Castle Concrete Co., Box 2462, Colorado Springs	Aggregate	Quarry
Lennox Breed	Colorado Springs	Colorado Lime Co., Rt. 1, Pike View	Aggregate, Limestone	Quarry & Plant
NORAD	Cheyenne Mountain	Utah Construction & Mining Co., Box 1580, Colorado Springs		Project
Ramah	Ramah	Monks Excavating & Ready Mix, Limon		Dam
Sand Pit No. 2	Colorado Springs	Transit Mix Concrete Co., Daniels Sand Division, Box 181, Colorado Springs	Sand	Pit & Plant

FREMONT COUNTY

Byzantine	Canon City	Colonna & Co. of Colorado, Inc., Box 387, Canon City	Limestone, Byzantine	Quarry
Calcite	Howard	Colorado Limestone Co., Box 8, Howard	Limestone	Quarry

FREMONT COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Canon Cream	Eight Mile Creek	Colonna & Co. of Colorado, Inc., Box 387, Canon City	Limestone, Building Material	Quarry
Canon Dolomite	Canon City	Colorado Fuel & Iron Corp., Box 847, Canon City	Dolomite	Quarry
Coaldale	Coaldale	Fibreboard Paper Products, Box 269, Florence	Gypsum	Quarry
Cotopaxi	Cotopaxi	Robert R. Benson, 723 Oak St., Canon City	Copper	Mine
Cotter Mill	Canon City	Cotter Corp., Box 751, Canon City	Uranium	Mill
Cowan Travertine	Canon City	Cowan Bros., 227 Main St., Canon City	Travertine, Marble	Quarry
English	English Siding	Colonna & Co. of Colorado, Inc., Box 387, Canon City	Marble	Quarry
Horney Ganister	Canon City	C. O. Wallace, 1619 Park Ave., Canon City		
I & E	Salt Canyon	Elmo Gien, 1222 S. First St., Canon City	Silica	Quarry
Insuplast	Canon City	Joe Vigil, 1011 W. First St., Florence	Clay	Mine
Joan	Tallahassee	William R. Irvin, Rt. 1, Penrose	Vermiculite	Mill
Last Chance	Tallahassee	Insuplast, Inc., Box 146, Canon City	Uranium	Mine
		Maxness & Bishop Mining Co., 826 Main St., Canon City		
		Gunnison Mining Co., Box 539, Gunnison	Uranium	Mine
Little Abney No. 1	Tallahassee	C. B. Johnson, Box S. Cortez	Uranium	Mine
		Logan E. Shelhamer Mining Cont., 800 N. 19th St., Canon City	Uranium	Mine
Mary L No. 1	Tallahassee	Logan E. Shelhamer Mining Cont., 800 N. 19th St., Canon City	Uranium	Mine
Mica Lode	Royal Gorge Park	Alex Lockhart & Sons, 431 Majestic St., Canon City	Quartz	Quarry
New Jersey Zinc Plant	Canon City	New Jersey Zinc Co., Box 319, Canon City	Zinc	Plant
Persolite	Florence	Persolite Products, Inc., Box 105, Florence	Perlite	Plant
Phantom Canyon	Beaver Creek Road	George Stroup, Eight Mile Park, Canon City	Clay	Mine
Picnic Tree	Canon City	C. B. Johnson, Inc., Box S. Cortez	Uranium	Mine
Pinnacle	Salida	Frank H. Norberg Co., 703 Guaranty Bank Bldg., Denver	Limestone	Quarry
Portland	Portland	Ideal Cement Co., Box 231, Florence	Limestone	Quarry & Plant
Rare Earth	Canon City	Uranium Mining & Development Corp., Box 288, Canon City	Rare Earth	Plant
Rock Products	Florence	Rock Products, Inc., Box 106, Canon City	Rock Products	Plant

FREMONT COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Saint John	Skyline Drive	Ray Sturbaum Mining, 225 Main St., Canon City	Sand, Ganister	Quarry
Salt Canyon	Salt Canyon	C. O. Wallace, Box 434, Canon City	Clay	Mine
Skyline	Canon City	Harbison-Walker Refractories Co., Box 150, Canon City	Sand	Quarry
Taylor Gulch	Taylor Gulch	Frank H. Norberg Co., 703 Guaranty Bank Bldg., Denver	Limestone	Quarry
Thunder Mountain	Wellsville	U.S. Soil Conditioning Corp., Box 346, Salida	Soil Conditioner	Quarry
Wild Rose	Texas Creek	Ralph J. Pierce, 108 Penn Ave., Canon City	Mica, Quartz, Beryl	Quarry
Yellow Marble	Canon City	Rock Products, Inc., Box 106, Canon City	Marble	Quarry

GARFIELD COUNTY

Basic Chemical Quarry	Glenwood Springs	Moab Drilling Co., Box 270, Glenwood Springs	Limestone	Quarry
Glenwood Springs Lime Quarry	Glenwood Springs	Frank H. Norberg Co., 703 Guaranty Bank Bldg., Denver	Limestone	Quarry
Oil Shale Plant	Rifle	U.S. Bureau of Mines, Rifle	Oil Shale	Mine & Plant
Rifle Mill	Rifle	Union Carbide Nuclear Co., Rifle	Uranium, Vanadium	Mill

GILPIN COUNTY

Bob Tail	Black Hawk	Gus Bakos & Robert Hollenbeck, Black Hawk	Tourist	Mine
Braecher Ranch	Black Hawk	McCoy & Jensen, 9800 Morrison Rd., Morrison	Peat	Peat Bog
Carroll	Central City	Klame Corp., 5060 South Inca St., Englewood	Gold, Silver, Lead, Zinc	Mine
Couch Placers Nos. 1 & 2	Black Hawk	Stancil Couch, Box 146, Black Hawk	Gold	Placer
Darlene & Mary Nuisance	Elk Creek	Alvin C. Amrhein, 3441 W. Colfax Ave., Denver	Gold	Placer
Diamond Lil	Central City	Central Gold Mine & Mining Museum, Box 161, Central City	Tourist	Mine
Durand	Lump Gulch	Durand Brothers, 935 S. Patton Court, Denver	Gold	Placer
Eagles Nest	Black Hawk	Michael Dugan, 4377 Eaton St., Morgan, Ashcroft & Patrick, Black Hawk	Gold, Silver	Mine
Fools Luck	Missouri Gulch			
Gangloff Placer No. 13670	Stewart Gulch	Pat Green, Box 86, Black Hawk	Gold	Mine
		Columbine Peat Co., 17215 W. 12th St., Golden	Peat	Peat Bog

GILPIN COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Glory Hole Gold Rock, Rotechild & Pocahontas	Central City	Glory Hole, Inc., Central City	Gold, Silver, Copper, Lead, Zinc	Mine & Mill
Golden Cycle	Silver Lake	Paul J. Janes, 1010 Grand Ave., San Francisco, Calif	Gold	Mine
Green	Perigo	Altwater & Fraser, 4630 Quitman St., Denver	Gold, Silver; Copper	Mine
Huddleston (Toll Gate)	Black Hawk	Thayer & Meyers, 8241 Auburn Lane, Westminster	Gold	Placer Mine
Kemp	Black Hawk Gilpin	Mike McNulty, Black Hawk Harvey F. Kemp, 62 S. Kimball St., Lakewood	Peat Gold, Silver Tourist	Peat Bog Mine Mine
La Crosse Little Colonel Mammoth	Central City Black Hawk Central City	Glory Hole, Inc., Central City Black Hawk Trading Post, Black Hawk Geo. & Sue Kong, 3205 N. Central Ave., Phoenix, Ariz	Gold, Silver Tourist Gold, Silver, Copper	Mine Mine Mine
National Bank Lode (Lost Gold)	Central City	Faye Tyson, Box 201, Central City	Tourist	Mine
Patricks Enterprise	Missouri Gulch	Robert W. Patrick, Rt. 1, Spencer	Gold	Mine
Phoenix	North Bever Creek	Graham & Eckholt, 3060 S. Bank St., Denver	Gold	Placer
Pojoe	Nevadaville	Fred W. Brooks, Idaho Springs	Gold	Placer
Red Cone Placer	Lump Gulch	Wayne Broyles, 5890 W. 1st Ave., Denver	Gold	Placer
Reider & Lawson	Black Hawk	Chalmers L. Reider, 630 Logan St., Denver	Gold	Placer
Rudolph Ranch	Black Hawk	Gus Rudolph, Black Hawk	Gold	Placer
Schaal	Perigo	Schaal Industries Corp., 3769 S. Kalamath St., Englewood	Peat	Peat Bog
Snooks Tunnel	Perigo	Bee Vee Mines, Box 135, Rollinsville	Gold, Silver, Lead, Zinc	Mill
Stephens	Missouri Gulch	Walter Stephens, Black Hawk	Gold, Copper	Mine
Wilma	Jennie Lind Gulch	Nye Metals, Inc., Black Hawk	Gold, Silver, Copper	Mine
Zacker	Black Hawk	Ralph Zacker, Black Hawk	Molybdenum	Mine

GUNNISON COUNTY

Anaconda (Copper-Girl Group)	Between Iola and Powderhorn	Smokey Ward Mining Co., 418 E. Virginia St., Gunnison	Silver, Copper	Mine
Big Iron Hill Tunnel	Powderhorn	Boyles Bros. Drilling Co., 2960 W. 7th Ave., Denver	Columbium	Mine
Blue Mesa Project— Curecanti Unit	Sapinero	Quad Construction, Inc., Box 116, Sapinero		
		Tecon Construction Co., Box 718, Gunnison		
Carter Mine & Mill	Gold Creek	O. A. Sutton, Box 95, Ohio City	Gold, Silver, Lead, Zinc	Project Mine & Mill
Copper King	Gold Creek	Fred Morlang et al, Rt. 2, Box 115, Olathe	Silver, Copper	Mine

GUNNISON COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Doctor	Haymaker Gulch	Karl Lambertson, Craig	Copper, Lead, Zinc	Mine
Forest Queen Group	Irwin	Forest Queen Mines, Inc., Box 396, Crested Butte	Silver	Mine
Gold Links	Gold Creek	H. L. Bird, 2656 4th St., Boulder	Gold, Silver, Lead, Zinc	Mine
Gunnison Mill	Gunnison	Kernac Nuclear Fuels Corp., Box 539, Gunnison	Uranium	Mill
Italian Quarry & Crushing Plant	Marble	H. L. Arbogast, 234 31.3 Rd., Grand Junction	Marble	Quarry & Plant
Keystone Group	Crested Butte	American Smelting & Refining Co., Crested Butte	Gold, Silver, Copper, Lead, Zinc	Mine
Little Johnnie No. 1	Powderhorn	John A. McGregor, Powderhorn	Thorium	Mine
Lucretia, George & Marion	Powderhorn	George Grover, Iola	Thorium, Rare Earth	Mine
Micawber	Crested Butte	Standard Metals, Moab, Utah	Thorium	Mine
Paonia Dam	Muddy Creek	Wellington Mines Association, Breckenridge	Gold, Silver, Copper, Lead, Zinc	Mine
Pennsylvania (Sunnybrook)	Gothic	Bud King Construction Co., Missoula, Montana	Gold, Silver, Copper, Lead, Zinc	Mine
Royal Chance (June Bug)	Halls Gulch	Paradise Mining Corp., Crested Butte	Dam	
Silent Friend	Cumberland Pass	H. F. Kane, Box 155, Poncha Springs	Gold	Mine
Silver Spruce	Gothic	Jack McClain, Parlin	Gold, Silver, Copper, Lead, Zinc	Mine
Skyline Group	Crested Butte	Mike Hildreth, 606 W. New York Ave., Gunnison	Gold, Silver, Copper, Lead, Zinc	Mine
Ternahan	Wanita Hot Springs	Frank Hodgson & Harry Downing, Box 401, Crested Butte	Gold	Mine
Titan	Powderhorn	J. C. Ternahan, Doyleville	Gold, Silver, Copper	Mine
Tomichi Village (Sloss Quarry)	Gunnison	H. O. Aaburg, Powderhorn	Fluorite, Rare Metals	Mine
Whitney	Powderhorn	J. C. Ward, Box 388, Gunnison, Hacker Stone Co., 536 W. 1st St., Loveland	Stone	Quarry
X-10-U-8 (Star-Independence)	Tincup	Boyd Roberts, Iola	Thorium	Mine
		John Lambertson, Box 567, Gunnison	Silver, Lead	Mine

HINSDALE COUNTY

Childs Park Lode	Wager Creek	W. J. Crain, Rt. 3, Box 83, Pueblo	Gold, Silver, Uranium	Mine
Edna	Hanson Creek	Lowell B. Swanson, Lake City	Gold, Silver, Copper, Lead, Zinc	Mine
Golconda	Hurricane Basin	Bob Watson & Carl Jensen, Monte Vista	Gold, Silver, Copper, Lead, Zinc	Mine
Highland Chief	Harrison Creek	Ajax Syndicate, Santa Barbara, Calif.	Gold, Silver, Copper, Lead, Zinc	Mine
Silver Jack & Conklin	Big Cimarron Creek	Jim Ingram and G. E. Wetzel, Montrose	Gold, Silver, Lead	Mine

JEFFERSON COUNTY

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Aggregates, Inc.	Golden	Aggregates, Inc., 2120 S. Ash St., Denver.	Crushed Stone	Plant
Ascension	Golden	Yellow Queen Uranium Co., 2027 E. Virginia St., Denver.	Uranium	Mine
Beryl Ores Co.	Arvada	Beryl Ores Co., Box 105, Rt. 1, Arvada	Beryl, Mica	Plant
Caldwell	Plainview	Denver Brick & Pipe Co., 4501 Fox St., Denver.	Clay	Mine
Church	Rocky Flats	Wesley D. Conda, Box 110, Rt. 1, Boulder.	Clay	Mine
Church's Shale Pit	Golden	Duane Bruno, 929 E. Ellsworth Ave., Denver.	Shale	Open Pit
Clalite Aggregate Co.	Golden	Clalite Aggregate Co., 4250 McIntyre St., Golden.	Shale (Expanded)	Plant
Cooper	Foxton	Earl M. Cooper, 1232 S. Eaton Court, Denver.	Quartz	Quarry
Foothills	Idledale	Magdalena Mining & Milling Co., Box 751, Canon City	Uranium	Mine
Foster	Twin Cedars	Dan W. Foster, Pike View	Quartz	Quarry
Green Mountain	Golden	Geo. W. Parfet Estate, Inc., Box 226, Golden	Clay	Mine
Harvey	Rocky Flats	John L. Harvey, 1609 Pierce St., Lakewood	Clay	Mine
Janice Lucertia	Twin Cedars	E. S. Robinson, Woodland Park	Quartz	Quarry
Kilgrove & Atchison	Lakewood	Kilgrove & Atchison Construction & Paving Co., Inc., Box 15385, Lakewood	Gravel	Plant
Lakewood	Golden	Lakewood Brick & Tile Co., 1325 Jay St., Lakewood	Clay	Mine
Lariat	Waterton	Robinson Brick & Tile Co., 500 S. Santa Fe Dr., Denver	Clay	Mine
Last Dollar	Guy Gulch	Carl Quist, Box 136, Lake George	Quartz	Quarry
Lee	Golden	Lee Sand & Gravel Co., Box 128, Wheatridge	Gold, Sand, Gravel	Plant
Leyden & Leyden Tan Plastic	Golden	G. C. Bennetts & Sons, Rt. 1, Box 759, Golden	Clay	Mine
McIntyre Plant	Golden	Asphalt Paving Co., 9655 W. Colfax Ave., Lakewood	Sand, Gravel	Plant
Mena Shaft	Golden	Magdalena Mining & Milling Co., Box 751, Canon City	Uranium	Mine
Morrison	Morrison	Denver Gravel & Concrete Co., Box 192, Morrison	Sand, Gravel	Plant
Mt. Carbon	Morrison	Duane Bruno, 929 E. Ellsworth Ave., Denver	Clay	Mine

JEFFERSON COUNTY—Continued

Name of Property Nare Prospect	Location	Operator's Name and Address	Product	Kind of Property
Golden Gate	Golden Gate Canyon	L. D. Ohman, 800 Bonnie Brae Blvd., Denver	Uranium	Mine
North Chieftain	Denver	Robinson Brick & Tile Co., 500 S. Santa Fe Dr., Denver	Clay	Mine
North Golden	Golden	Denver Fire Clay Co., 3303 Blake St., Denver	Clay	Mine
Oregon No. 3	Buffalo Creek	Forest Hamilton, 1415 N. 6th St., Golden	Quartz	Quarry
Patridge	Golden	Calite Aggregate Co., 4250 McIntyre St., Golden	Shale	Quarry
Pit No. 11 Plant	Ward Road	Brannan Sand & Gravel Co., 4800 Brighton Blvd., Denver	Gold, Sand, Gravel	Plant
Platte Canyon Intake Dam	Waterton	F. H. Linneman, Inc., 1300 Harlan, Lakewood		Dam
Red Clay (Lindsay)	Leyden	Lakewood Brick & Tile Co., 1325 Jay St., Lakewood	Clay	Mine
Rio Grande	Golden	Rio Grande Gravel Co., 44th & Eldridge Ave., Denver	Gold, Sand, Gravel	Plant
Rockwell	Golden	Geo. W. Parfet Estate, Inc., Box 226, Golden	Clay	Mine
Rocky Flats	Boulder	Idealite Company, 806 Boston Bldg., Denver	Shale	Quarry & Plant
Rubey Standard	Golden	H. M. Rubey Clay Co., Box 226, Golden	Clay	Mine
Schwartzwalder	Ralston Creek	Denver-Golden Corp., 2138 Champa St., Denver	Uranium	Mine
South Chieftain	Golden	Robinson Brick & Tile Co., 500 S. Santa Fe Dr., Denver	Clay	Mine
South Golden Open Pit	Golden	Denver Fire Clay Co., 3303 Blake St., Denver	Clay	Mine
State	Rocky Flats	Colorado Brick Co., Box 727, Longmont	Clay	Mine
Strainland No. 1 & Pit	Golden	Denver Brick & Pipe Co., 4501 Fox St., Denver	Clay	Mine
Table Mountain, Inc.	N. Table Mtn.	Table Mountain, Inc., 2680 Youngfield Ave., Denver	Gold, Sand, Gravel	Plant
Terra Cotta	Golden	Lakewood Brick & Tile Co., 1325 Jay St., Lakewood	Clay	Mine
Twin Cedars	Twin Cedars	John Toler, 506 S. 11th St., Colorado Springs	Quartz	Quarry
Two Brothers	Golden	Denver Fire Clay Co., 3303 Blake St., Denver	Clay	Mine
White Cloud	Raleigh Peak	William Johnson, Fountain	Quartz	Quarry
Yami Yogurt	Twin Cedars	Herbert Crisler, Lake George	Quartz	Quarry

LAKE COUNTY

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Arkansas Plant	Climax	C. Ryan & Son, Box 378, Climax	Sand, Gravel	Plant
Buffer's Lake Sand Plant	Climax	C. Ryan & Son, Box 378, Climax	Sand, Gravel	Plant
Ceresco Tunnel	Climax	American Metals Climax, Inc., Climax	Molybdenum	Mine
Climax Mine	Climax	American Metals Climax, Inc., Climax	Molybdenum	Mine
Climax Mill	Climax	American Metals Climax, Inc., Climax	Molybdenum	Mill
Climax Molybdenum Sodium Silica Plant	Climax	J. A. Park's Construction Co., Box 426, Climax		Mill
Homestake Tunnel	Leadville	M & L Contractors, 307 E. 7th St., Leadville		Water Tunnel
Luna Placer	Granite	Go-Re Company, Granite	Gold	Placer
Matchless	Leadville	Leadville Assembly, Leadville	Tourist	Mine
Tennessee Pass Tunnel	Tennessee Pass	Bechtel Corp., 220 Bush Street, San Francisco, Calif.		Project

LA PLATA COUNTY

Blackhawk	La Plata Canyon	Ralph Jason, 5252 Edinger St., Huntington Beach, Calif.	Silver, Lead	Mine
Brawner Mill	Lewis Mtn.	Steward Brothers, Box 1303, Durango	Gold, Silver, Lead	Mill
Columbine Pit	Durango	Columbine Guest Ranch, Inc., Box 200, Star Route, Durango	Peat	Peat Bog
Copper Age	Bedrock Gulch	Copper Age Uranium Co., Box 124, Marvel	Copper	Mine
Copper Age Leach Plant	Marvel	Copper Age Uranium Co., Box 124, Marvel	Copper	Plant
enny Lind	Wall Gulch	Steward Brothers, Box 1303, Durango	Gold, Lead	Mine
Lemon Dam	Florida Creek	Canon Diamond Drill Co., 1464 W. Compton Blvd., Compton, Calif., A. S. Horner Construction Co., Inc., Box 1587, Durango		
Mars	La Plata Canyon	Colorado Constructors, Inc., 735 W. 39th Ave., Denver		Dam
Sarah G	Hermosa	C. Z. Reed, 1755 Conrad Ave., San Jose 24, Calif.	Gold, Silver, Copper, Lead, Zinc	Mine
Small Hope Group	La Plata Canyon	Charles C. Goulding, Star Route, Box 210, Durango	Silver	Mine
V.C.A. Mill	Durango	B.E.T. Mining Co., Box 83, Monticello, Utah	Gold, Silver	Mine
Western Bell	Wall Gulch	Vanadium Corporation of America, Durango	Uranium, Vanadium	Mill
		Steward Brothers, Box 1303, Durango	Gold	Mine

LARIMER COUNTY

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Berthoud Varigated No. 20	Carter Lake	Colorado Stone Co., 1635 N. Main St., Longmont	Stone	Quarry
Big Boulder	Crystal Mtn.	W. R. & Helen S. Allphine, Box 292, Jamestown	Beryl, Mica	Mine
Boettcher Plant & Quarry	La Porte	Ideal Cement Co., Box 579, Fort Collins	Limestone	Plant & Quarry
Chance	Masonville	Weaver Stone Quarries, 759 S. York St., Denver	Stone	Quarry
Colorado Stone Nos. 4, 10	East Beach Hill	Colorado Stone Co., 1635 N. Main St., Longmont	Stone	Quarry
Corral Pole Nos. 1, 2	Crystal Mtn.	Arthur Johnson, 625 Mathews St., Fort Collins	Beryl, Mica	Mine
Goodwin	Payne Ranch	Ernest W. Munroe, Rt. 2, Box 273, Fort Collins	Gypsum	Quarry
Holly	Owl Canyon	Frank H. Norberg, 703 Guaranty Bank Bldg., Denver	Limestone	Quarry
Jolex No. 2	Columbine	Jolex Mica Co., Box 575, Fort Collins	Mica, Beryl	Plant
Langston	Columbine	Jolex Mica Co., Box 575, Fort Collins	Mica, Beryl	Mine
Lodge Pole	Crystal Mtn.	George G. Young, 395 Grape St., Denver	Mica, Beryl	Mine
Loveland Quarry	Loveland	U.S. Gypsum Co., Estes Park Rt., Loveland	Gypsum	Quarry
Masonville	Masonville	Sterling Stone Quarries, Box 58, Lyons	Stone	Quarry
Mincon Berthoud Plant	Berthoud	Mineral Concentrates & Chemical Co., Inc., 1430 First National Bank Bldg., Denver	Beryllium Oxide	Plant
Mincon Loveland Plant	Loveland	Mineral Concentrate & Chemical Co., Inc., 1430 First National Bank Bldg., Denver	Beryllium Hydroxide	Plant
Munroe	Payne Ranch	Ernest W. Munroe, Rt. 2, Box 273, Fort Collins	Gypsum	Plant
Munroe Pioneer	Fort Collins	Pinion Grove Lime Co., Rt. 2, Box 273, Fort Collins	Limestone	Plant
Olin	Masonville	Arthur Olin, Estes Park Rt., Loveland	Stone	Quarry
Pinion Grove	Fort Collins	Pinion Grove Lime Co., Rt. 2, Box 273, Fort Collins	Limestone	Plant
Rex	Owl Canyon	Roberts Lime, Inc., Box 27, La Porte	Limestone	Quarry
Spears	Beach Hill	Frank H. Norberg Co., 703 Guaranty Bank Bldg., Denver	Limestone	Quarry
Sprague C	Carter Lake	B. H. Spear & Son, Box 283, Lyons	Stone	Quarry
		Berthoud Pink Stone Co., Rt. 2, Box 99A, Berthoud	Stone	Quarry

LARIMER COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Sterling	Taft Hill Road	Sterling Sand & Gravel Co., Rt. 3, Box 560, Fort Collins	Sand, Gravel	Plant
Stewart	Beach Hill	Stewart Ledge Stone Co., Box 193, Rt. 1, Longmont	Stone	Quarry
Weaver	Masonville	Weaver Stone Quarries, 759 S. York St., Denver	Stone	Quarry
Wild South	Masonville	George Wild Stone Quarries, Estes Park Rt., Loveland	Stone	Quarry
Yaqunina Green Quartz No. 2	Forest Service Road 1652	King & F. R. Koenig, Pingree Park, Bellvue	Quartz	Quarry

LAS ANIMAS COUNTY

Floyd Pit No. 4	Floyd Ranch	Empire Clay Products, Inc., Box 156, Trinidad	Clay	Mine
Pit Nos. 1, 2, 3	Trinidad	Empire Clay Products, Inc., Box 156, Trinidad	Clay	Mine
Sante Fe	Starkville	Scott Mining Co., Starkville	Clay	Mine

MESA COUNTY

Arrowhead No. 5	Arrowhead Mesa	Ira Adamson, 226 29 Road, Grand Junction	Uranium, Vanadium	Mine
Arrowhead No. 12	Calamity Mesa	Ralph Sterry, 415 30 $\frac{1}{4}$ Road, Grand Junction	Uranium, Vanadium	Mine
Arrowhead No. 23	Calamity Mesa	Howard Sterry, 2482 F Road, Grand Junction	Uranium, Vanadium	Mine
Arrowhead No. 25	Calamity Mesa	Edward Knizley, 2763 $\frac{1}{2}$ B Road, Grand Junction	Uranium, Vanadium	Mine
Arrowhead No. 26	Calamity Mesa	Ben Zimmerman, 2940 $\frac{1}{2}$ F Road, Grand Junction	Uranium, Vanadium	Mine
Arrowhead No. 27	Calamity Mesa	Norman Wellman, 2975 Craig St., Grand Junction	Uranium, Vanadium	Mine
Arrowhead No. 252	Calamity Mesa	Ben Zimmerman, 2940 $\frac{1}{2}$ F Road, Grand Junction	Uranium, Vanadium	Mine
Austin	Beaver Mesa	Michael Montgomery, Box 211, Gateway	Uranium, Vanadium	Mine
Belmont No. 2	Calamity Mesa	Norman Wellman, 2975 Craig St., Grand Junction	Uranium, Vanadium	Mine
Big 7	Blue Mesa	Lee Hetzel, Box 455, Clifton	Uranium, Vanadium	Mine

MESA COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Blue Ribbon No. 4	Calamity Mesa	Ira Adamson, 226 29 Road, Grand Junction		
		Omore Mining Co., c/o J. F. Ortmayer, Grand Junction		
		Edward Knizley, 2763½ B Road, Grand Junction		
Bonanza	Beaver Mesa	Argo Mining Co., Box 1698, Grand Junction	Uranium, Vanadium	Mine
Bonanza Shaft No. 2	Beaver Mesa	Climax Uranium Co., Box 989, Grand Junction	Uranium, Vanadium	Mine
Century Tunnel	Beaver Mesa	Argo Mining Co., Box 1698, Grand Junction	Uranium, Vanadium	Mine
Cherokee	Beaver Mesa	H. O. L. Mining Co., 606 Partee Dr., Grand Junction	Uranium, Vanadium	Mine
Climax Mill	Grand Junction	Climax Uranium Co., Box 989, Grand Junction	Uranium, Vanadium	Mine
Depression Nos. 5, 6	Flat Top Mesa	James D. Gibson, Box 372, Palisade	Uranium, Vanadium	Mill
Economy Nos. 1, 2	Outlaw Mesa	Harold Price, Box 74, Nuclea	Uranium, Vanadium	Mine
Elizabeth Nos. 10, 17	Mesa Creek	George Liverman, Box 431, Grand Junction	Uranium, Vanadium	Mine
		H. O. & L. A. Willison, 3038 F-¾ Road, Grand Junction		
Hubbard Drift & Packrat	Beaver Mesa	Joe Pitts, 330 W. Mesa Ave., Grand Junction	Uranium, Vanadium	Mine
Jacob's Ladder	Jacob's Ladder Road	United Stone Products Co., Inc., 1620 N. 1st St., Grand Junction	Quartz	Quarry
Joe	Tenderfoot Mesa	E. E. Lewis, Inc., Box 1481, Grand Junction	Uranium, Vanadium	Mine
July	Outlaw Mesa	H. L. Arbogast, 234 31.3 Road, Grand Junction		
		Robert Morrison, Clifton		
		Eugene Bonner, Box 855, Grand Junction		
Junction Brick & Supply	Grand Junction	Junction Brick & Supply Co., 2400 N. 17th St., Grand Junction	Uranium, Vanadium	Mine
Karns	Beaver Mesa	Edward Knizley, 2763½ B Road, Grand Junction	Clay	Mine
La Sal	Beaver Mesa	Mark Shipman, Box 861, Grand Junction	Uranium, Vanadium	Mine
Liberty Bell	Tenderfoot Mesa	E. E. Lewis, Inc., Box 1481, Grand Junction	Uranium, Vanadium	Mine
Loma	Loma	United Stone Products Co., 1622 N. 1st St., Grand Junction	Uranium, Vanadium	Mine
Lost Dutchman No. 1	Beaver Mesa	Argo Mining Co., Box 1698, Grand Junction	Stone	Quarry
			Uranium, Vanadium	Mine

MESA COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Lucius Pitkin, Inc.	Grand Junction	Lucius Pitkin, Inc., Box 1351, Grand Junction	Uranium Concentrate	Plant
Lumsden (Johnny May)	Beaver Mesa	Joe Pitts, 330 W. Mesa St., Grand Junction	Uranium, Vanadium	Mine
Mesa No. 8	Outlaw Mesa	Ralph Foster & Sons, 2950 A½ Road, Grand Junction	Uranium, Vanadium	Mine
Mineral Channel No. 3	Outlaw Mesa	George Liverman, Box 431, Grand Junction	Uranium, Vanadium	Mine
New Verde	Calamity Mesa	Star Mining Co., Box 291, Grand Junction	Uranium, Vanadium	Mine
October Adit	Gateway	O. E. Jonson, Box 394, Dove Creek	Uranium, Vanadium	Mine
O'Kan	Tenderfoot Mesa	Dave Betts, General Delivery, Grand Junction	Uranium, Vanadium	Mine
Packrat	Beaver Mesa	Bud Cowger, Grand Junction	Uranium, Vanadium	Mine
Protector	Tenderfoot Mesa	H. O. L. Mining Co., 606 Partee Dr., Grand Junction	Uranium, Vanadium	Mine
Rainbow	Outlaw Mesa	Phil Bunker Box 227, Nucla	Uranium, Vanadium	Mine
Rajah No. 30	Beaver Mesa	Howard Arbogast, 234 31.3 Road, Grand Junction	Uranium, Vanadium	Mine
Ronnie No. 1	Outlaw Mesa	Model Mining Co., Box 1105, Grand Junction	Uranium, Vanadium	Mine
Snowshoe & M. C. No. 3	Outlaw Mesa	George Liverman, Box 431, Grand Junction	Uranium, Vanadium	Mine
Sun	Outlaw Mesa	Ralph Foster & Sons, 2950 A½ Road, Grand Junction	Uranium, Vanadium	Mine
Thornton Tunnel	Beaver Mesa	Ralph Foster & Sons, 2950 A½ Road, Grand Junction	Uranium, Vanadium	Mine
United Sand & Gravel	Grand Junction	Charles V. Woodward, 2909 U.S. 50, Grand Junction	Uranium, Vanadium	Mine
Whitewater Sand & Gravel	Whitewater	United Sand & Gravel, 1714 S. 6th, Grand Junction	Sand, Gravel	Plant
		Whitewater Sand & Gravel, Box 1751, Grand Junction	Sand, Gravel	Quarry

MINERAL COUNTY

Amethyst	West Willow Creek	Emperius Mining Co., Creede	Silver, Copper, Lead	Mine
Commodore	West Willow Creek	Emperius Mining Co., Creede	Silver, Copper, Lead, Zinc	Mine
Creede Mill	Creede	Emperius Mining Co., Creede	Gold, Silver, Copper, Lead, Zinc	Mill
Mexico	East Willow Creek	Outlet Mining Co., Creede	Silver, Lead, Zinc	Mine

MOFFAT COUNTY

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Maybell Mill	Maybell	Union Carbide Nuclear Co., Maybell	Uranium	Mill
Trace Elements Pits.	Maybell	Hoyt Deaver & Son, Craig Ralph Flish & Son, Walden Hopkins Mining Co., 1340 S. Lipan St., Denver		
		Art Keas, c/o Union Carbide Nuclear Co., Maybell		
		Grover Williams, c/o Union Carbide Nuclear Co., Maybell	Uranium	Mine

MONTEZUMA COUNTY

Discovery Level (Red Arrow Group)	Mancos	Hardway Mining Co., c/o Bert Thompson, Box 1269, Durango		Mine
Sexton Bros. Drilling	Montezuma	Sexton Bros. Drilling Co., Box 506, Cortez	Silver, Copper	
Twin Canyon Group	Twin Canyon	Charles & Wesley Potts, Mancos	Gold	Drilling Mine

MONTROSE COUNTY

Alta	Martin Mesa	Lee Moores, Jr., 2129 S. Broadway, Grand Junction	Uranium	Mine
American Eagle	Little Gyp Valley	McClure & Topliss, Dove Creek Eldon Harker & John Cate, Box 71, Egnar		
Anna May	Monogram Mesa	Cole & Bond Mining Co., Box 188, Nucla	Uranium	Mine
April Arrowhead	Bull Canyon Long Park	Albert L. Bell, Box 612, Nucla Cole & Bond Mining Co., Box 188, Nucla	Uranium, Uranium	Mine Mine
Aztec	Monogram Mesa	Cecil Bunker, Box 27, Nucla	Uranium, Uranium	Mine Mine
Baby Fawn	Bull Canyon	James Lammert, Park Creek Road, Moab, Utah	Uranium, Uranium	Mine Mine
Baby Ruth	Bull Canyon	O. E. Smart, Box 296, Naturita	Uranium, Uranium	Mine Mine
Badger No. 1	Long Park	C. C. Sanders, Box 396, Nucla	Uranium, Uranium	Mine Mine
Bagger	Long Park	Wolverton & Morlang, Rt. 2, Box 115, Olathe	Uranium	Mine
Betty Jean (Lower)	Martin Mesa	David Pace, Naturita	Uranium	Mine
Betty Jean (Upper)	Martin Mesa	Ernest Berry, Box 237, Naturita	Uranium	Mine
Bill Batey	Monogram Bench	Clifton Carter, Naturita	Uranium, Uranium	Mine Mine
Bitter Creek	Bitter Creek	Levi B. Barnes, Box 156, Nucla	Uranium, Uranium	Mine Mine
Bitter Creek Nos. 300, 400	Bitter Creek	Lloyd Rainwater, Nucla O. E. Smart, Box 296, Naturita O. E. Pitchford, 381 West Miguel Blvd., Moab, Utah	Uranium, Uranium	Mine Mine

MONTROSE COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Black Rock	Dolores Bench	Githon Reid, Naturita	Uranium, Vanadium	Mine
Blackburn	Monogram Mesa	Reid Brothers, Naturita	Uranium, Vanadium	Mine
Bluebell	Long Park	Lowell Staats, Box 350, Nucla	Uranium, Vanadium	Mine
		Dave Blake & Frank Power, Box 91, Uravan	Uranium, Vanadium	Mine
Bluebird	Dolores Rim	Cecil Bunker, Box 27, Nucla	Uranium, Vanadium	Mine
Bob Nos. 6, 7, 8	Bull Canyon	Oral Clark, Box 728, Nucla	Uranium, Vanadium	Mine
Bob Tail	Monogram Mesa	Cole & Bond Mining Co., Box 188, Nucla	Uranium, Vanadium	Mine
Bogus	Mesa Creek	Union Carbide Nuclear Company, Uravan	Uranium, Vanadium	Mine
Bowen Shaft	Atkinson Mesa	Golden Cycle Corporation, Box 86, Colorado Springs	Uranium, Vanadium	Mine
Buckeye	Long Park	O. E. Smart, Box 296, Naturita	Uranium, Vanadium	Mine
Bushshot	Club Mesa	Marion Trone, Norwood	Uranium, Vanadium	Mine
Butterfly Group	Yellowbird Bench	Homer Woods, Box 313, Paradox	Uranium, Vanadium	Mine
		Dade & Shumway, 215 Landsdown Road, Grand Junction	Uranium, Vanadium	Mine
C. F. C.	Long Park	Lark Washburn, Box 850, Uravan	Uranium, Vanadium	Mine
Canopus Group	Monogram Bench	Lark Washburn, Box 850, Uravan	Uranium, Vanadium	Mine
Capella	Monogram Bench	Union Carbide Nuclear Company, Uravan	Uranium, Vanadium	Mine
Carpathia	Long Park	C. C. Sanders, Nucla	Uranium, Vanadium	Mine
Cashin	La Sal Creek	Intermountain Oil & Gas Inc., 455 E. 4th South, Room 404, Salt Lake City, Utah	Uranium, Vanadium	Mine
Cliff Dweller	Dolores Rim	Glen Gardner, Box 202, Naturita	Uranium, Vanadium	Mine
Club Group	Club Mesa	Lark Washburn, Box 850, Uravan	Uranium, Vanadium	Mine
Club Mine	Club Mesa	Woodrow Gripe, Box 225, Naturita	Uranium, Vanadium	Mine
Club Sandwich Group	Dolores Bench	Woodrow Gripe, Box 225, Naturita	Uranium, Vanadium	Mine
		Jerry Mayfield, Box 222, Naturita	Uranium, Vanadium	Mine
Coloradium	Long Park	Cole & Bond Mining Co., Box 188, Nucla	Uranium, Vanadium	Mine
Crab Orchard	Bull Canyon	Daguerre Brothers, Box 951, Uravan	Uranium, Vanadium	Mine
Cripple Creek No. 1	Long Park	O'Bryant & Powell, Box 124, Uravan	Uranium, Vanadium	Mine
Cripple Creek No. 2	Long Park	Albert Nickerson, Box 171, Montrose	Uranium, Vanadium	Mine
(Arrowhead)		Cole & Bond Mining Co., Box 188, Nucla	Uranium, Vanadium	Mine
Deer Shaft	Monogram Bench	Booth Eckman, Box 127, Nucla	Uranium, Vanadium	Mine
Diana	Bull Canyon	E. J. Alongo, Box 42, Naturita	Uranium, Vanadium	Mine
Doagy No. 2 (Last Dollar)	Monogram Bench	D. C. Bunker, Box 27, Nucla	Uranium, Vanadium	Mine
Dolores	Dolores Bench	Dave Blake & Frank Power, Uravan	Uranium, Vanadium	Mine
Donald L.	Long Park	Lloyd Rainwater, Nucla	Uranium, Vanadium	Mine
		Rainwater & Bond, Nucla	Uranium, Vanadium	Mine
Dorothy	Long Park	C. C. Sanders, Nucla	Uranium, Vanadium	Mine

MONTROSE COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Duchess No. 2	Martin Mesa	Woodrow Gripe, Box 225, Naturita	Uranium, Vanadium	Mine
Duggan Adit	Monogram Mesa	Climax Uranium Co., Box 989, Grand Junction	Uranium, Vanadium	Mine
Dusty No. 2	Long Park	Jerry Mayfield, Box 222, Naturita	Uranium, Vanadium	Mine
Dynamite	Long Park	O. E. Smart, Box 296, Naturita	Uranium, Vanadium	Mine
Echo No. 3	Bull Canyon	Boyd Castor, Nucla	Uranium, Vanadium	Mine
Equinox	Dolores Rim	Clifford Goforth, Uravan	Uranium, Vanadium	Mine
		Stan Oliver, Norwood	Uranium, Vanadium	Mine
		American Eagle Leasing Co., Box 343, Norwood	Uranium, Vanadium	Mine
Eula Belle	Mesa Creek	Gordon Irvine, Egnar	Uranium, Vanadium	Mine
Eureka & Buckhorn	Carpenter Ridge	Union Carbide Nuclear Co., Uravan	Uranium, Vanadium	Mine
		Vanadium Corporation of America, Naturita	Uranium, Vanadium	Mine
F Tunnel	Olathe	Kennedy & Herring, Box 194, Nucla	Uranium, Vanadium	Mine
Fawn Springs Nos. 2, 9, 11, 12, 18, 21		Fay Lambert, 814 S. 2nd St, Montrose	Uranium, Vanadium	Mine
Fawn Springs No. 5	Bull Canyon	Oral Clark, Box 728, Nucla	Uranium, Vanadium	Mine
Fawn Springs No. 29	Bull Canyon	Delbert Burbridge, Box 187, Nucla	Uranium, Vanadium	Mine
Firecracker No. 2	Bull Canyon	Guy Mullanax, Box 465, Nucla	Uranium, Vanadium	Mine
	Long Park	Vanadium Corporation of America, Durango	Uranium, Vanadium	Mine
Firecracker Nos. 3, 4	Long Park	Andrew Brothers, Box 333, Norwood	Uranium, Vanadium	Mine
Fox	Dolores Rim	Delbert Burbridge, Box 187, Nucla	Uranium, Vanadium	Mine
		Dave Blake & Frank Power, Box 91, Uravan	Uranium, Vanadium	Mine
Fraction	Dolores Rim	Dave Blake & Frank Power, Box 91, Uravan	Uranium, Vanadium	Mine
		Douglas Cleghorn, 623 26 Road, Grand Junction	Uranium, Vanadium	Mine
Golden Eagle	Eagle Basin	Dale Souther, Box 66, Redvale	Uranium, Vanadium	Mine
Greggor Group	Bull Canyon	Rex Holland, Box 234, Naturita	Uranium, Vanadium	Mine
Great Western	Long Park	Neilson & Klingensmith, Box 337, Uravan	Uranium, Vanadium	Mine
Greenback	Monogram Bench	Cole & Bond Mining Co., Box 188, Nucla	Uranium, Vanadium	Mine
Ground Hog	Long Park	Dade & Shumway, 215 Landsdown Road, Grand Junction	Uranium, Vanadium	Mine
		Lark Washburn, Box 850, Uravan	Uranium, Vanadium	Mine
Guadalcanal	Long Park	D. C. Bunker, Box 27, Nucla	Uranium, Vanadium	Mine
Gyp	Cyp Valley	Jim Butt, Dove Creek	Uranium, Vanadium	Mine
Happy	Long Park	O'Bryant & Powell, Box 124, Uravan	Uranium, Vanadium	Mine
Henry Clay	Long Park	Roy Franklin, Box 119, Uravan	Uranium, Vanadium	Mine

MONTROSE COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Hidden Basin	Long Park	Red Athey, Naturita Vanadium Corporation of America, Durango	Uranium, Vanadium	Mine
Himes Drilling	Four Corners	Himes Drilling Co., Box 727, Nucla	Uranium, Vanadium	Mine
Honeymoon	Middle Long Park	C. C. Sanders, Box 396, Nucla	Uranium, Vanadium	Mine
Hummer	Monogram Mesa	Lowell Staats, Box 337, Nucla	Uranium, Vanadium	Mine
Independence	Lion Creek	Dade & Shumway, 215 Landsdown Road, Grand Junction	Uranium, Vanadium	Mine
Joe	Dolores Rim	Douglas Cleghorn, Box 502, Uravan	Uranium, Vanadium	Mine
Johnson & Youvan, Inc.	Four Corners	Johnson & Youvan, Inc., Box O, Naturita	Uranium, Vanadium	Mine
Lark No. 7	Bull Canyon	Everett Blackburn, Placerville	Uranium, Vanadium	Mine
Lark No. 8	Bull Canyon	James F. Galyean, Box 474, Nucla	Uranium, Vanadium	Mine
Lion Creek	Lion Creek	Four Corners Oil & Mineral Co., Farmers Union Bldg., Denver	Uranium, Vanadium	Mine
Little Alice	Wild Steer Canyon	Woodrow Griep, Box 225, Naturita	Uranium, Vanadium	Mine
Little Buckhorn	Martin Mesa	Lathrop & McCullah, Nucla	Uranium, Vanadium	Mine
Little Dick	Dolores Bench	Delbert Burbridge, Box 187, Nucla Dave Blake & Frank Power, Box 91, Uravan	Uranium, Vanadium	Mine
Little Gyp Group	Little Gyp Valley	Benny Martinez, Box 224, Dove Creek	Uranium, Vanadium	Mine
Long Park No. 1	Long Park	Walter F. Burnett, Box 386, Nucla J. R. Bond, Nucla	Uranium, Vanadium	Mine
Long Park No. 2	Middle Long Park	C. C. Sanders, Box 396, Nucla	Uranium, Vanadium	Mine
Long Park No. 6	Long Park	Lark Washburn, Box 850, Uravan	Uranium, Vanadium	Mine
Lower Oversite	Monogram Mesa	Lark Washburn, Box 850, Uravan	Uranium, Vanadium	Mine
MacPherson Drilling	Black Hawk & Kitmac Mines	MacPherson Drilling Co., Box 447, Montrose	Uranium, Vanadium	Drilling
Maggie C. Group	Middle Long Park	Lloyd Rainwater, Box 13, Nucla Edward Wolverton & Fred Morlang, Delta	Uranium, Vanadium	Mine
Marjorie Ann	Lion Creek	Dade & Shumway, 215 Landsdown Road, Grand Junction	Uranium, Vanadium	Mine
Mary Ann No. 4	Monogram Bench	T. S. Wolverton, Box 284, Uravan	Uranium, Vanadium	Mine
Maude	Yellowbird Bench	Homer Woods, Uravan	Uranium, Vanadium	Mine
Maybe	Monogram Mesa	Union Carbide Nuclear Co., Uravan	Uranium, Vanadium	Mine
Media Group	Middle Long Park	Jerry Mayfield, Box 222, Naturita	Uranium, Vanadium	Mine
Meek Tunnel	Crawford	Gordon & Carton Meek, Box 7, Maher	Uranium, Vanadium	Water Tunnel
Merry Widow	Eagle Basin	C. N. Athey, Naturita	Uranium, Vanadium	Mine
Mesa	Upper Bull Canyon	Orval Care, Box 286, Naturita	Uranium, Vanadium	Mine
Mill Nos. 2, 4	Club Mesa	Javernick, Javernick & Borgeson, Box 484, Uravan	Uranium, Vanadium	Mine

MONTROSE COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Mineral Joe Nos. 1, 4, 11	Monogram Mesa	Climax Uranium Co., Box 989, Grand Junction	Uranium	Mine
Mineral Joe Nos. 2, 3	Monogram Mesa	Sam Richards, Box 384, Nuclea	Uranium	Mine
Mineral Park Nos. 1, 2	Long Park	Floyd Smith, Box 275, Naturita	Uranium	Mine
Modene	Sylvia's Pocket	David McCluer, Box 398, Dove Creek	Uranium	Mine
Monogram (Lower & Upper)	Monogram Bench	Cole & Bond Mining Co., Box 188, Nuclea	Uranium	Mine
Monogram	Martin Mesa	Stanley Reed & Edward Smith, Box 325, Naturita	Uranium	Mine
Monster	Saucer Basin	R. C. Williams & J. C. Hise, Box 547, Nuclea	Uranium	Mine
Mustard	Dolores Rim	Douglas Cleghorn, Nuclea	Uranium	Mine
Nil No. 2	East Paradox	Union Carbide Nuclear Co., Uravan	Uranium	Mine
North Hummer	Monogram Mesa	Lowell Staats, Box 350, Nuclea	Uranium	Mine
North Star	Dolores Rim	Jerry Mayfield, Box 222, Naturita	Uranium	Mine
Nuclea	Dolores Rim	Cecil Bunker, Box 27, Nuclea	Uranium	Mine
Opera Box	Monogram Bench	Lark Washburn, Box 850, Uravan	Uranium	Mine
Ophir	Dolores Rim	Union Carbide Nuclear Co., Uravan	Uranium	Mine
Overbite	Monogram Mesa	Pete Daguerre, Box 951, Uravan	Uranium	Mine
Paradox Nos. 5, 6	Monogram Mesa	O'Bryant & Powell, Uravan	Uranium	Mine
Paradox D	Martin Mesa	Gerald Randolph, Box 33, Naturita	Uranium	Mine
Pay Day	Bull Canyon	Warren Wright & A. C. Rinderle, 404 Sherman Drive, Grand Junction	Uranium	Mine
Peanut No. 1	Upper Bull Canyon	A. C. Rinderle, 404 Sherman Drive, Grand Junction	Uranium	Mine
Peanut No. 3	Bull Canyon	Ernest Berry, Box 237, Naturita	Uranium	Mine
Peanut No. 4	Saucer Basin	Neilson & Klingensmith, Box 875, Uravan	Uranium	Mine
Peggie Group Phonograph	Middle Long Park	Dade & Shumway, 215 Landsdown Road, Grand Junction	Uranium	Mine
Pi Warren	Lion Creek	Andrews and Son, Box 87, Nuclea	Uranium	Mine
Picket Corral	Lower Bull Canyon	Pete Daguerre, Box 951, Uravan	Uranium	Mine
Point Empire	Martin Mesa	Morrison & Morrison, Box 195, Nuclea	Uranium	Mine
Radium Hill	Bull Canyon	James Galyean, Box 474, Nuclea	Uranium	Mine
Radium Hill No. 10	Bull Canyon	B. J. Burns, Box 941, Uravan	Uranium	Mine
Rajah	Rock Creek	Herring & Kennedy, Box 194, Nuclea	Uranium	Mine
Raven	Little Gyp Valley	Spangler & Karo, Box 375, Nuclea	Uranium	Mine
Red Flag	Lower Bull Canyon	Rex Holland, Box 234, Naturita	Uranium	Mine

MONTROSE COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Red Rock No. 5	Martin Mesa	Albert Nickerson, Box 171, Montrose	Uranium	Mine
Red Sox	Atkinson Rim	Frank Elder, Nucla	Uranium	Mine
Republican	Long Park	Herring & Kennedy, Box 194, Naturita	Uranium	Mine
Rex No. 38	Eagle Basin	Williams Mining Partnership, Naturita	Uranium	Mine
Rigel	Monogram Bench	Union Carbide Nuclear Co., Uravan	Uranium	Mine
Rim Rock No. 5	Wedding Bell	Clyde Jones, Box 183, Naturita	Uranium	Mine
Rim Rock Blues No. 5	Bull Canyon	Adolphus Moore, Box 4, Naturita	Uranium	Mine
		O Bryant & Powell, Box 124, Uravan		
		Dave Blake, Box 91, Nucla	Uranium	Mine
Rim Rock Blues No. 17	Bull Canyon	Cole & Bond Mining Co., Box 188, Nucla	Uranium	Mine
Rosebud	Dolores Rim	William Morrison, General Delivery, Nucla	Uranium	Mine
Sandy	Dolores Rim	Douglas Cleghorn, Box 502, Uravan	Uranium	Mine
School Marm	Bull Canyon	Rex Holland, Box 243, Naturita	Uranium	Mine
September Morn & Radium Hill No. 31	Bull Canyon	Morrison & Morrison, Box 195, Nucla	Uranium	Mine
Sesmo	Long Park	Albert L. Bell, Box 614, Nucla	Uranium	Mine
Sharkey	Long Park	Neilson & Klingensmith, Box 337, Uravan	Uranium	Mine
Sphinx	Middle Long Park	Neilson & Klingensmith, Box 337, Uravan	Uranium	Mine
Star No. 6	Dolores Rim	Lark Washburn, Box 850, Uravan	Uranium	Mine
Starlight	Bull Canyon	Rex Holland, Box 243, Naturita	Uranium	Mine
Sunbeam	Eagle Basin	Dale Souther, Redvale	Uranium	Mine
Sunrise Nos. 3, 4	Bull Canyon	Rex Holland, Box 234, Naturita	Uranium	Mine
Sylvia	Sylvia's Pocket	Roy Franklin, Box 911, Uravan	Uranium	Mine
T.N.T. No. 3	Long Park	Morrison & Mulanox, Nucla	Uranium	Mine
Three Jacks	Yellowbird Bench	Norman Morrison, Box 195, Nucla	Uranium	Mine
		Ernest Berry, Box 237, Naturita		
Thunderbolt	Monogram Mesa	Dade & Shumway, 215 Landsdown Road, Grand Junction	Uranium	Mine
		Polar Mesa Mining Co., Box 859, Moab, Utah		
Tramp No. 1	Saucer Basin	Lark Washburn, Box 850, Uravan	Uranium	Mine
U.C.N.C. Mill	Uravan	Union Carbide Nuclear Co., Uravan	Uranium	Mine
Uranium Girl	Yellowbird Bench	Horner Woods, Box 313, Paradox	Uranium	Mill
Uranus	Monogram Bench	Cole & Bond Mining Co., Box 188, Nucla	Uranium	Mine
Uravan No. 2	Hieroglyphic Canyon	Wayne Howlett & Edwin Scheuerman, Box 271, Naturita	Uranium	Mine
Uravan Acid Plant	Uravan	Leonard Construction Co., 37 S. Wabash Ave., Chicago 3, Illinois	Uranium	Mine
V.C.A. Concentrator	Naturita	Vanadium Corporation of America, Naturita	Uranium	Plant

MONTROSE COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Vaden View	Wild Steer	Jerry Mayfield, Box 222, Naturita		
Valley View	Carpenter Ridge	Woodrow Gripe, Box 225, Naturita	Uranium, Vanadium	Mine
Van	East Paradox Valley	E. E. Lewis, Inc., Box 1481, Grand Junction	Uranium, Vanadium	Mine
Vanadate	Long Park	Fred Morlang & Ed Wolverton, Box 115, Rt. 2, Olathe	Uranium, Vanadium	Mine
Vanadium King	Long Park	Fred Morlang & Ed Wolverton, Box 115, Rt. 2, Olathe	Uranium, Vanadium	Mine
Virgin	Long Park	K. C. Mining Co., Box 294, Naturita	Uranium, Vanadium	Mine
Wanda No. 3	Long Park	Delmar Bunker, Nuclea	Uranium, Vanadium	Mine
Whang Doodle	Wild Steer Canyon	Jim Patterson, Box 427, Uravan	Uranium, Vanadium	Mine
Whitney Shaft	Long Park	Woodrow Gripe, Box 225, Naturita	Uranium, Vanadium	Mine
		DeVar Shumway, 215 Landsdown Road, Grand Junction		
Worcester	Dolores Bench	Nickerson Mining Co., Box 171, Montrose	Uranium, Vanadium	Mine
Yellow Bird	Monogram Bench	Worcester Mines, 2512 Mira Vista Road, Grand Junction	Uranium, Vanadium	Mine
		Cole & Bond Mining Co., Box 188, Nuclea	Uranium, Vanadium	Mine

OTERO COUNTY

Rocky Ford (Valley Concrete)	Rocky Ford	Valley Concrete Co., Box 550, Rocky Ford	Sand, Gravel	Plant
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OURAY COUNTY

Alma	Stony Peak	Green Rock Mining Co., Box 444, Aztec, New Mexico	Gold, Silver	Mine
Bi-Metallist	Canon Creek	Bi-Metallist Mining Co., Inc., Box 86, Ouray	Gold	Mine
Camp Bird Mine & Mill	Canon Creek	Camp Bird Colorado, Inc., Ouray	Gold, Silver, Copper, Lead, Zinc	Mine & Mill
Edna Nos. 1 - 6	Ironton Park	Saint Germain Foundation, Box 549, Ouray	Gold, Silver, Copper	Mine
Frank Hough	Engineer Mtn.	W. I. Gray, 743 E. Costilla Ave., Colorado Springs	Gold, Silver, Copper	Mine
Hidden Treasure	Imogene Basin	Susquehanna Western, Inc., 777 Grant St., Denver	Gold, Silver, Copper, Lead, Zinc	Mine
Idarado	Red Mtn.	Idarado Mining Co., Ouray	Gold, Silver, Copper, Lead, Zinc	Mine
Mayflower Group	Ouray	Bear Creek Mining Co., Box 438, Ouray	Silver, Copper	Mine
Mineral Farms	Ouray	M. W. Waldrum, Box 526, Ouray	Gold, Silver, Lead, Quartz	Mine

OURAY COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Rouville.....	Red Mtn.	Rouville Mining Co., Box 388, Silverton	Gold, Silver, Copper, Lead, Zinc.	Mine
Seaburg Tunnel (American Nettie Group).....	Gold Hill	W. R. Nichols & O. C. Baker, 502 Main St., Montrose	Gold, Silver, Copper, Lead, Zinc.	Mine
Wewissi Group.....	Diamond Creek	Warren Kuykendall, Ouray	Gold, Silver, Copper, Lead, Zinc.	Mine
PARK COUNTY				
Alma Pits.....	South Alma	Aura Lee Engineering Co., Box 1676, Denver	Gold	Placer
Black Prince.....	Georgia Pass	Georgia Pass Mining Co., Jefferson	Gold, Silver, Copper, Lead, Zinc.	Mine
Boomer.....	Badger Flats	U. S. Beryllium, 306 Bondurant Bldg., Pueblo	Beryllium	Mine
Cork Screw Tunnel.....	Alma	Douglas Brothers, Box G, Alma	Gold, Silver, Copper, Lead, Zinc.	Mine
Ducommun.....	Alma	Leslie Ducommun, 2311 S. Nicolett St., Sioux City, Iowa	Peat	Peat Bog
Hazel-Marie.....	Tarryall	Tri-State Metals Corp., Box 71, ~ Chester, West Virginia	Beryllium	Mine
Janice No. 2.....	Tarryall	Manitou Springs	Beryllium	Mine
Lucky Jim.....	Hartsel	Charles Kirby, 18 Manitou Terrace, Manitou Springs	Beryllium	Mine
Penn Mountain Placer.....	Penn Mtn.	George A. West, Guffey	Uranium	Mine
Phillips.....	Alma	Hesser, Drake & Cole, Fairplay	Gold	Placer
Progressive Mill & Smelter.....	Sacramento Gulch	Buckskin Joe Mines, Ltd., Alma	Gold, Silver, Copper, Lead, Zinc.	Mine
Shawnee No. 1.....	Shawnee	Progressive Mill & Smelter Co., Box 212, Fairplay	Gold, Silver, Copper, Lead, Zinc.	Mill
Tarryall Mill.....	Badger Flats	North Fork Mining & Mfg. Co., Box 34, Bailey	Uranium	Mine
Twin Sisters.....	Buckskin Joe	Mineral Concentrates & Chemical Co., Inc., Suite 1430, First National Bank Bldg., Denver	Beryllium	Mill
Union No. 5.....	Buckskin Joe	A. M. Hansen, et al, 9000 West 64th Place, Arvada	Gold, Silver	Mine
Universal Peat Co.....	Jefferson	S & S Mining Co., Box 171, Fairplay	Gold, Silver	Mine
		Universal Peat Co., c/o Merrill Wright, 5926 W. Arizona Ave., Denver	Peat	Peat Bog

PITKIN COUNTY

Pitkin Iron Mine.....	Ashcroft	Morrison & Knudsen Co., Inc., Carbondale	Iron	Mine
Woody Creek Crusher.....	Woody Creek	Morrison & Knudsen Co., Inc., Carbondale	Iron	Crusher

PROWERS COUNTY

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Lamar Valley Concrete	Lamar	Valley Concrete Co., 4th & Washington Sts., Lamar	Sand, Gravel	Plant

PUEBLO COUNTY

Certified Crushing Plant & Pit	Pueblo	Certified Concrete Co., First & Dayton Sts., Pueblo	Sand, Gravel	Plant
Chamblin	Mustang	Standard Fire Brick Co., 24th & Albany Sts., Pueblo	Clay	Mine
Fountain Sand & Gravel	Pueblo	Fountain Sand & Gravel, Joplin St. & Arkansas River, Pueblo	Sand	Plant
Kathryn	Turkey Creek	Magdalena Mining Co., Box 751, Canon City	Uranium	Mine
Nellie Helen	Stone City	Arthur L. Wands, Stone City Rt., Pueblo	Clay	Mine
Number Two	Stone City	General Refractories Co., Box 192, Pueblo	Clay	Mine
Open Pit Mine	Stone City	General Refractories Co., Box 192, Pueblo	Clay	Mine
Rock Creek	Beulah	Standard Fire Brick Co., 24th & Albany Sts., Pueblo	Clay	Mine

RIO BLANCO COUNTY

Coal Creek No. 1	Uranium Peak	Devereaux Brothers, Box 373, Meeker	Uranium	Mine
Midnight	Uranium Peak	J & H Mining Co., Box 643, Meeker	Uranium	Mine

ROUTT COUNTY

Canary Placer	Steamboat	Philip Ward, Route 1, Rifle	Gold	Placer
McCoy Cinder Pit	McCoy	McCoy Aggregate Co., McCoy	Cinders	Quarry

SAGUACHE COUNTY

East	Cochetopa Creek	Gunnison Mining Co., Box 539, Gunnison	Uranium	Mine
Lookout	Harry Creek	Gibralter Mining Co., Box 114, Gunnison	Uranium	Mine
Mercury Alpine	Westcliffe	Col-Tex, 725 N. Zarzamora St., San Antonio, Texas	Uranium	Mine
Pitch Tunnel	Indian Creek	Pinnacle Exploration Company, Box 598, Gunnison	Uranium	Mine
Rawley No. 12	Bonanza	Superior Mines Corp., Box 127, Salida	Silver, Lead, Zinc	Mine & Mill

SAGUACHE COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Saltwash	Cochetopa	Gunnison Mining Co., Box 539, Gunnison	Uranium	Mine
Thornburg Nos. 1, 2	Gunnison	Gunnison Mining Co., Box 539, Gunnison	Uranium	Mine
SAN JUAN COUNTY				
American Tunnel	Gladstone	Standard Metals Corp., Box 247, Silverton	Gold, Silver, Copper, Lead, Zinc	Mine
Blackhawk	Cement Creek	John Distol, Silverton Silver Bay, Inc., 1117 E. 7th Place, Mesa, Arizona	Gold, Silver, Copper, Lead, Zinc	Mine
Blanchard Placer	Pickeyune Gulch	Moreno Uranium Corp. & U.S. Minerals Corp., Box 2727, Denver	Gold	Placer
Copper Queen	Sultan Mtn	Les Morales & Russel Blaisdell, Silverton	Silver, Copper	Mine
Delano-Jer Bar Group	Cement Creek	Jerry Matten, Box 534, Gallup, New Mexico	Gold, Silver, Copper, Lead, Zinc	Mine
Elk Park Group (Long Mine)	Elk Park	Gaddis Mining Co., 1500 Mile High Center, Denver	Uranium	Mine
Graysill Group	Hermosa Creek	Vanadium Corporation of America, Box 760, Durango	Uranium, Vanadium	Mine
Kittimac	Crown Mtn	U.S. Minerals Corp., 19 Rector St., New York City		
		MacPherson Drilling Co., Box 447, Montrose	Gold, Silver, Copper, Lead, Zinc	Mine
Longfellow	Red Mtn. Pass	George Thornburg, & Pecchio, Box 220, Ouray	Gold, Silver, Lead	Mine
Louis Lynn (Illinois)	Howardsville	Jerry Dalla, 425 6th Ave., Durango	Gold, Silver, Copper, Lead, Zinc	Mine
Mighty Monarch Group	Silverton	Silverton Mining Co., c/o A. G. Butler, Box 451, Silverton	Gold, Silver, Copper, Lead, Zinc	Mine
Pride Mill	Howardsville	G.W.C., Inc., Box 193, Silverton	Gold, Silver, Copper, Lead, Zinc	Mill
Richardson No. 1	Emporium Gulch	Frank Richardson, Box 546, Ouray	Gold, Silver, Copper, Lead, Zinc	Mine
Shenandoah Mill	Silverton	Standard Metals Corp., Box 247, Silverton	Gold, Silver, Copper, Lead, Zinc	Mill
Silent Friend Group	Cinnamon Pass	Cross & Sons, Inc., General De- ivery, Cortez	Gold, Silver, Copper, Lead, Zinc	Mine
Silver Cloud	Mill Creek	T. B. Gilliland, Box 392, Silverton	Gold, Copper, Lead	Mine
Silver Wing	Jones Mtn	Silver Wing Mining Co., Box 535, Silverton	Gold, Silver, Copper, Lead, Zinc	Mine

SAN JUAN COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Spafford's Peat Bog	Near Hermosa Ranger Station	Spafford Company, Box 93, Farmington, New Mexico.	Peat	Peat Bog
Standard Mill	Silverton	Standard Metals Corp., Box 247, Silverton	Gold, Silver, Copper, Lead, Zinc	Mill
Sunny Side Mill	Eureka	Glen A. Boyd & Cecil Brew, Pea-Green Store, Delta	Gold	Mill
SAN MIGUEL COUNTY				
Atlas & Clara	Matterhorn	Montonati Brothers, 683 4th Ave., Durango	Silver, Lead	Mine
Bachelor Shaft	Bachelor Draw	Bachelor Mines, Box 337, Dove Creek	Uranium, Vanadium	Mine
Bean Patch Nos. 3, 4, 10	Bean Patch	Dulaney Mining Co., Box 1951, Grand Junction	Uranium, Vanadium	Mine
Bear Creek Group	Newmire	Vanadium Corporation of America, Naturita	Uranium, Vanadium	Mine
Bell Claims	Gypsum Gap	Vern Dufur, Box 1858, Farmington, New Mexico	Uranium, Vanadium	Mine
Blackjack	Slick Rock	Pete C. Franks, Box 594, Nucla	Uranium, Vanadium	Mine
Bob	Slick Rock	Sanchez Mining Co., Dove Creek	Uranium, Vanadium	Mine
Burro	Bridal Veil Basin	Mailey Mining Co., Box 331, Dove Creek	Uranium, Vanadium	Mine
Burro Nos. 3, 5, 7	Slick Rock	Oscar Blixt, Box 192, Telluride Hunter Mining & Milling Co., Box 125, Telluride	Gold	Mine
Carnation	Gyp Valley	Union Carbide Nuclear Co., Dove Creek	Uranium, Vanadium	Mine
Charles T. Group	Slick Rock	Lowell Staats, Box 185, Nucla	Uranium, Vanadium	Mine
Chili No. 5	Hamm Bench	W. D. Tripp, Dove Creek	Uranium, Vanadium	Mine
Colorado	La Junta Basin	Lark Washburn, Box 850, Uravan	Uranium, Vanadium	Mine
Deadwood	Old Ophir	Polar Mesa Mining Co., Moab Utah, Conking Contracting Co., Box 1286, Wichita Falls, Texas	Gold, Silver, Lead, Zinc	Mine
De Luxe	Horse Range	Silver Hat Mining, Inc., Box 664, Ophir	Gold, Silver, Copper, Lead, Zinc	Mine
Deremo	Egnar	Carr & Woods, Ucolo Rt., Dove Creek	Uranium, Vanadium	Mine
Dynamo	Telluride	Union Carbide Nuclear Co., Dove Creek	Uranium, Vanadium	Mine
Falcon Group	Slick Rock	Dick & George Koskinen, Box 474, Telluride	Gold, Silver, Lead	Mine
Favorite	Yellow Mtn	Sanchez Mining Co., Dove Creek	Uranium, Vanadium	Mine
		Charles Chastain, Telluride	Gold, Silver, Copper, Lead, Zinc	Mine

SAN MIGUEL COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Frankie Adit	Legin Area	Pete Franks, Box 594, Nucla	Uranium, Vanadium	Mine
Frenchie No. 2	Slick Rock	E. E. Lewis, Inc., Box 1481, Grand Junction	Uranium, Vanadium	Mine
Garibaldi	Matterhorn	Silver Hat Mining, Inc., Box 664, Ophir	Gold, Silver, Copper, Lead, Zinc	Mine
Governor No. 2	Bishop Canyon	James C. Butt, Ucolo Rt., Dove Creek	Uranium, Vanadium	Mine
Groundhog	Hamm Canyon	Dade & Shumway, 215 Landsdown Road, Grand Junction	Uranium, Vanadium	Mine
Groundhog Dump Group	Wedding Bell	Cleo Addis, 602 Gunnison St., Grand Junction	Uranium, Vanadium	Mine
Hangover	Legin Area	Dade & Shumway, 215 Landsdown Road, Grand Junction	Uranium, Vanadium	Mine
Horseshoe Nos. 2, 4, 5	Horseshoe Bend	James C. Butt, Ucolo Rt., Dove Creek	Uranium, Vanadium	Mine
Idarado	Pandora	Laverne Ray, Box 256, Uravan	Uranium, Vanadium	Mine
Iron Springs	Old Ophir	Jack Milling, Egnar	Uranium, Vanadium	Mine
Jack Knife No. 1	Wedding Bell	M. J. Mining Co., Box 266, Cortez	Uranium, Vanadium	Mine
Jack Pot Group	Gyp Valley	Idarado Mining Co., Ouray	Gold, Silver, Copper, Lead, Zinc	Mine
Jim No. 2	Spud Patch	Earl Stuller, Grand Junction	Bog Iron	Mine
Joe Dandy	Sawpit	Dade & Shumway, 215 Landsdown Road, Grand Junction	Uranium, Vanadium	Mine
Keystone	Slick Rock Hill	Alex Herrera, Box 10, Rt. 1, Dolores	Uranium, Vanadium	Mine
King No. 2, Incline Nos. 3, 5	Slick Rock	Benny Martinez, Box 224, Dove Creek	Uranium, Vanadium	Mine
Lake View Group	Matterhorn	Nelson & Klingensmith, Box 875, Uravan	Uranium, Vanadium	Mine
Little Jimmy	Telluride	Burwell Mining Co., Egnar	Uranium, Vanadium	Mine
Lone Star No. 1	Slick Rock	E. E. Lewis, Inc., Box 1481, Grand Junction	Uranium, Vanadium	Mine
Magpie	Middle Gyp Valley	Silver Hat Mining, Inc., Box 664, Ophir	Gold, Silver, Copper, Lead, Zinc	Mine
Mainstreet	Wedding Bell	Jim Dalpez, Telluride	Gold, Silver	Mine
		Olen Willey & James Dilts, Slick Rock	Uranium, Vanadium	Mine
		Laverne Ray, Nucla	Uranium, Vanadium	Mine
		Dade & Shumway, 215 Landsdown Road, Grand Junction	Uranium, Vanadium	Mine

SAN MIGUEL COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Marne	Spud Patch	Benny Martinez, Box 224, Dove Creek	Uranium, Vanadium	Mine
May Nos. 1, 2, 3	Slick Rock	E. E. Lewis, Inc., Box 1481, Grand Junction	Uranium, Vanadium	Mine
Mickey (New Hangover)	Slick Rock	Bob London, Box 217, Naturita	Uranium, Vanadium	Mine
North Slope	Hayden Peak	Burwell Mining Co., Egnar	Uranium, Vanadium	Mine
Norther No. 6	Horse Range	North Slope Mining Co., Hotel Moab, Moab, Utah	Gold, Silver, Copper, Lead, Zinc	Mine
Ortmayer Lease	Slick Rock	E. J. Johannsen, Box 117, Nucla	Uranium, Vanadium	Mine
Pandora Mill	Telluride	E. E. Lewis, Inc., Box 1481, Grand Junction	Uranium, Vanadium	Mine
Parrot No. 1	Mineral Mtn	Idarado Mining Co., Telluride	Gold, Silver, Copper, Lead, Zinc	Mill
Penigal	Spud Patch	Jack Milling, Egnar	Uranium, Vanadium	Mine
Pitch Fork	Gyp Valley	Clyde Sanchez, Box 314, Dove Creek	Uranium, Vanadium	Mine
Pond	Gyp Valley	C. H. Corey, Box 652, Durango	Uranium, Vanadium	Mine
Radium Nos. 4, 5, 9, 10	Bean Patch	Joe Baldwin, Nucla	Uranium, Vanadium	Mine
Red Ant	Hogback	Dick Butt, Scotty Wilson, Box 60, Blanding, Utah	Uranium, Vanadium	Mine
Red Rock No. 5	Mule Shoe	Charles N. Pickens Mining Co., Mancos	Uranium, Vanadium	Mine
Rock of Ages	Navajo Basin	E. J. Johannsen, Box 117, Nucla	Uranium, Vanadium	Mine
Roy Lee	Mineral Mtn	Dulaney Mining Co., Box 1951, Grand Junction	Uranium, Vanadium	Mine
Roy Quinn Drilling	Four Corners Area	James C. Butt, Ucolo Rt., Dove Creek	Uranium, Vanadium	Mine
S. B. Group	North Pine Hill	B. M. Mining Co., Box 325, Naturita	Uranium, Vanadium	Mine
Sage No. 11	Bishop Canyon	Sunrise Exploration Co., Redvale	Gold	Mine
Savage	La Junta Basin	Lloyd Welch & Allan Cross, Rt. 1, Box 168, Dolores	Uranium, Vanadium	Mine
Skidmore	Slick Rock	Roy Quinn, Box 195, Naturita	Uranium, Vanadium	Mine
Silver Pick Mill	Mt. Wilson District	Dick Butt & Scotty Wilson, Box 60, Blanding, Utah	Uranium, Vanadium	Mine
Slick Rock Concentrator	Slick Rock	Corey Mining Co., Box 652, Durango	Uranium, Vanadium	Mine
		Hunter Mining & Milling Co., Box 125, Telluride	Gold	Mine
		E. E. Lewis, Inc., Box 1481, Grand Junction	Uranium, Vanadium	Mine
		Hunter Mining & Milling Co., Box 125, Telluride	Gold, Silver	Mill
		Union Carbide Nuclear Co., Uravan	Uranium, Vanadium	Plant

SAN MIGUEL COUNTY—Continued

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Strawberry Roan	Bishop Canyon	Corey Mining Co., Box 652, Durango	Uranium, Vanadium	Mine
Summit No. 21	Slick Rock	Burwell Mining Co., Egnar	Uranium, Vanadium	Mine
Summit Group	Slick Rock	W. D. Tripp, Box 118, Dove Creek	Uranium, Vanadium	Mine
Sunday	Gyp Valley	Lyle Francis, Box 577, Meeker	Uranium, Vanadium	Mine
Sunnyside & Jack O'Lantern	Slick Rock	Carr & Woods, Ucola Rt., Dove Creek	Uranium, Vanadium	Mine
Tailholt	Slick Rock	Joe Gomez, Slick Rock	Uranium, Vanadium	Mine
Telluride	Bridal Veil Basin	Blixt Brothers, Box 192, Telluride	Gold, Silver	Mine
Utah	Slick Rock	Jerry Mayfield, Box 222, Naturita	Uranium, Vanadium	Mine
Uncle Sam	Gyp Valley	Allan & Stewart Cross, Cortez	Uranium, Vanadium	Mine
Vanadium Queen & Civit Cat	MacIntyre Canyon	Lyle Francis, Box 204, Moab, Utah	Uranium, Vanadium	Mine
Veta Glad & Veta Mad	Slick Rock	Gayno Mining Co., Box 547, Montrose	Uranium, Vanadium	Mine
Victor No. 3	Egnar	Olen Willey, Slick Rock	Uranium, Vanadium	Mine
Windswept	Gyp Valley	Laverne Ray, Box 703, Nucla	Uranium, Vanadium	Mine
Yellow Bird	Slick Rock	Dulaney Mining Co., Box 1951, Grand Junction	Uranium, Vanadium	Mine
Yellow Jacket Group	Old Ophir	Hunter Mining & Milling Co., Box 125, Telluride	Uranium, Vanadium	Mine

SUMMIT COUNTY

Ballard	Boreas Pass	Burton, O'Dowd, Burkholder, & Tom Moran, Breckenridge	Gold, Silver, Lead	Mine
Baron Placer	Tiger	O. A. Sutton, 407 Insurance Bldg., Wichita, Kansas	Gold	Placer
Boss	Farncomb Hill	James P. Webb & Earl W. Knight, Jr., Breckenridge	Gold	Mine
Dillon Dam	Dillon	Potashnick Construction Co., Box 357, Dillon	Dam	Dam
Gagen Tunnel	Kokomo	Gold Hill Mines, 1808 19th St., Golden	Silver, Lead, Zinc	Mine
Jumbo	Gibson Hill	Fiskno Co., Inc., Box 134, Grand Junction	Gold	Mine
Montezuma Shaft	Montezuma	Blue River Constructors, Inc., Box 236, Dillon	Project	Project
Ryan & Son Screening Plant	Kokomo	C. Ryan & Son, Climax	Sand, Gravel	Plant
Silver Queen	Kokomo	Kokomo, Inc., Poncha Springs	Silver, Lead, Zinc	Mine
Wellington Mine & Mill	French Gulch	Wellington Mine Association, Box 392, Breckenridge	Silver, Lead, Zinc	Mine & Mill

TELLER COUNTY

Name of Property	Location	Operator's Name & Address	Product	Kind of Property
Alpen Meadows	Gillette	Alpen Meadows, Inc., Box 1074, Colorado Springs		
Black Cloud	Divide	Wayne Bangert, Box 633, Wood- land Park	Peat	Peat Bog
Carlton Mill	Victor	Herb Cristler, Lake George	Quartz	Quarry
El Paso	Beacon Hill	Golden Cycle Corp., Box 47, Victor	Gold	Mill
Link Peat Moss	Divide	El Paso Gold Tours, Inc., c/o Dale Seiders, Antlers Hotel, Colorado Springs	Tourist	Mine
Mollie Kathleen	Tenderfoot Hill	Robert Wilson, Box 51, Divide	Peat	Peat Bog
Penrose-Rosemont Dam	Colorado Springs	Black Diamond Mining Co., Box 998, Cripple Creek	Tourist	Mine
Pikes Peak	Florissant	C. L. Hubner Co., 4473 E. Evans Ave., Denver		Dam
		Pikes Peak Granite Co., 2115 N. Tejon St., Colorado Springs	Granite	Quarry

WELD COUNTY

Garner	Greeley	Fay Garner & Co., Box 913, Greeley	Sand, Gravel	Plant
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HIGHWAY PROJECTS

County	Location	Operator's Name & Address	Project
Fremont	West of Penrose	Bailey Construction Co., 6130 S. Windermere Ave., Littleton	Highway
Mesa	Grand Junction	Wallace Beard Construction Co., 2041 N. 8th Ave., Grand Junction	Highway
San Miguel	Grand Mesa & Four Corners	Brasier Brothers, Norwood	Highway
El Paso	South of Colorado Springs	Broderick & Gibbons, Inc., Box 1741, Colorado Springs	Highway
El Paso	Southeast of Colorado Springs	Bryson Construction Co., 2918 Country Club, Pueblo	Highway
Custer	East of Westcliffe	Colorado Contractors, Inc., 725 W. 29th St., Denver	Highway
Routt	East of Toponas		Highway
Saguache	Cochetopa Pass		Highway
Summit	Frisco-Dillon-Breckenridge		Highway
Montrose	Delta-Pea Green-Olathe	Corn Construction Co., Box 1051, Grand Junction	Highway
Gunnison & Hinsdale	North of Lake City	Gardner Construction Co., Box 1751, Grand Junction	Highway
Mesa	Palisade		Highway-Bridge
San Miguel	Lizardhead Pass		Highway
Gunnison	From Owl Creek Pass to Jackson Ranger Station	C. Q. Hefner, 2554 E. Bijou St., Colorado Springs	Highway
Mesa	North of Palisade & Clifton	Herron & Strong, Inc., Platteville	Highway
Summit	North of Climax		Highway
Clear Creek	East Portal Access Road	C. L. Hubner Construction Co., 4473 E. Evans, Denver	Highway
Park	Breckenridge		Highway
Archuleta	Pagosa Springs to Chromo	Peter Kiewit & Sons, Box 22167, Welshire Branch, Denver	Highway
El Paso	North of Colorado Springs		Highway
San Miguel	Disappointment Valley		Highway-Bridge
Saguache	Doyleville-Sargents	J. S. Kloberdanz Contractors, Inc., Rt. 1, Box 106, Henderson	Highway

HIGHWAY PROJECTS—Continued

County	Location	Operator's Name & Address	Project
El Paso	Fountain	Dominic Leone Construction Co., 818 Oak St.,	Highway
Huerfano	North of Walsenburg	Trinidad	Highway
Prowers	Highway 50		Highway
Boulder	Northeast of Nederland	H. E. Lowdermilk, 1950 W. Dartmouth Ave.,	Highway
Gunnison	Sapinero	Englewood	Highway-Bridge
Pitkin	East of Aspen		Highway
Boulder	Raymond	Z. H. Lowdermilk, Inc., 1950 W. Dartmouth Ave.,	Highway
Grand	Rabbit Ears Pass	Englewood	Highway
Huerfano	La Veta Pass		Highway
Jefferson	West of Morrison		Highway
Montrose	North of Montrose	C. E. Mills Contractor, Box 231, Rt. 2, Montrose.	Highway
Ouray			Gravel Crusher
Gunnison	North side of Durango	Nielson, Inc., Box 684, Dolores.	Gravel Crusher
La Plata	Towaoc to Cortez		Highway
Montezuma	South of Ouray, around Mother Cline Area		Highway
Montezuma	North of Four Corners	Northwestern Engineering Co., 6001 Dexter St., Denver	Highway
Costilla	North of San Luis	Pioneer Construction Co., Box 898, Pueblo.	Highway
Custer	Westcliffe to Wetmore		Highway
Pueblo	South & North of Pueblo		Highway
Mesa	Unaweep Canyon	E. J. Rippey & Sons Construction Co., Box 638, New Castle.	Highway-Bridge
Montezuma			Highway
Mesa	North Slope of Grand Mesa	Rocky Mountain Construction Co., Box 1833, Missoula, Montana.	Highway
Gunnison	Cochetopa Creek to Parlin	Schmidt Construction Co., 8150 W. 49th St., Arvada	Highway
Conejos	West of Antonito	Siegrist Construction Co., 7000 York St., Denver.	Highway
El Paso	Highway 115		Highway
Fremont	Highway 50		Highway
LaPlata	Bayfield		Highway
LaPlata	Durango Area	J. D. Simmons, Box 176, Rt. 3, Durango.	Highway
Garfield	Douglas Pass Area	Theo Wood Construction Co., Salt Lake City, Utah.	Highway

OIL & GAS DRILLING & PRODUCING COMPANIES

Name & Address of Company	County	Operation
Alamosa Drilling Company, Box 211, Alamosa.....	Costilla	Drilling
B. F. Allison Drilling Company, Box 709, Fort Morgan.....	Adams Morgan Washington	Drilling
Arapahoe Drilling Company, 2472 U.S. Highway 6 & 50, Grand Junction.....	Garfield	Drilling
Atlas Well Service, Inc., Box 387, Fort Morgan.....	Adams Jackson Morgan Washington	Drilling
Baker Well Service, Rangely.....	Rio Blanco	Drilling
Baney Well Service, Box 588, Sterling.....	Morgan	Drilling
Brinkerhoff Drilling Company, 870 Denver Club Building, Denver.....	Washington	Drilling
Bueno Drilling Company, Continental Oil Building, Denver.....	Rio Blanco	Drilling
Cactus Drilling Company, Drawer 71, San Angelo, Texas.....	La Plata	Drilling
California Oil Company, Rangely.....	Montezuma	Drilling
Calvert Exploration Drilling Company, Tulsa, Oklahoma.....	Rio Blanco	Producing
Camay Drilling Company, 1535 Denver Club Building, Denver.....	Dolores	Drilling
Canfield Drilling Company, Fort Morgan.....	Moffat	Drilling
Carmack Drilling Company, 1700 Broadway, Denver.....	Rio Blanco	Drilling
Circle A Drilling Company, 1515 Cleveland Place, Denver.....	Archuleta La Plata	Drilling
Colorado Well Service, Rangely.....	Mesa Moffat Rio Blanco	Drilling
Colorado & Western Drilling Company, 1119 Mile High Center, Denver.....	Mesa	Drilling
Davis Drilling Company, 202 McBride Building, Great Bend, Kansas.....	Baca Bent Kiowa	Drilling
Denver Drilling Company, Box 285, Fort Morgan.....	Morgan Weld	Drilling
John Dixon Drilling & Well Servicing Company, Box 467, Sterling.....	Washington	Drilling
B. A. Dodgen, Route 1, Alamosa.....	La Plata	Drilling
Donnelly Casing & Pulling Company, Sterling.....	Washington	Drilling
Etman Drilling Company, Box 141, Kimball, Nebraska.....	Washington	Drilling

OIL & GAS DRILLING & PRODUCING COMPANIES—Continued

Name & Address of Company	County	Operation
Exeter Drilling Company, 1730 Glenarm Place, Denver.....	Adams	Drilling
	La Plata	
	Logan	
	Morgan	
	Washington	
Garvey Drilling Company, Route 2, Great Bend, Kansas.....	Baca	Drilling
J. W. Gibson Well Service, Inc., 316 Pine Street, Fort Morgan.....	Washington	Drilling
	Weld	
Gist Exploration Company, Box 1731, Casper, Wyoming.....	Moffat	Drilling
Graham-Michaelis Drilling Company, Box 896, Liberal, Kansas.....	Baca	Drilling
Great Western Drilling Company, Box 1659, Midland, Texas.....	Archuleta	Drilling
	La Plata	
Grossman Drilling Company, Farmington, New Mexico.....	La Plata	Drilling
H & B Construction Company, Box 363, Sterling.....	Logan	Drilling
H & H Drilling Company, Grand Junction.....	Mesa	Drilling
Hathaway Company, Box 2371, Santa Fe Springs, California.....	La Plata	Drilling
Horizon Oil & Gas Company, 500 Republic Bank Building, Dallas, Texas.....	Baca	Drilling
O. B. Hubbard, Rangely.....	Rio Blanco	Drilling
Huron Drilling Company, Farmington, New Mexico.....	La Plata	Drilling
Jet Drilling Company, 820 Central Building, Wichita, Kansas.....	Weld	Drilling
S. D. Johnson, 219 Midland Savings Building, Denver.....	Washington	Drilling
K. D. Drilling Company, 301 Bondurant Building, Pueblo.....	Fremont	Drilling
Kerr-McGee Oil Industries, Inc., Kerr-McGee Building, Oklahoma City, Oklahoma.....	Baca	Drilling
	Montrose	
Kimbark Exploration Company, 201 University Building, Denver.....	Washington	Drilling
Layne Western Company, 8301 East Iliff Avenue, Denver.....	Jefferson	Drilling
Le Mans Drilling Company, 1700 Broadway, Denver.....	Washington	Drilling
	Weld	
Lohmann Oil Well Service, Box 1530, Farmington, New Mexico.....	La Plata	Drilling
Love Miller Drilling Company, 712 Patterson Building, Denver.....	Larimer	Drilling
R. L. Manning Company, 1700 Broadway, Denver.....	Dolores	Drilling
	Moffat	
Marken Drilling Company, Casper, Wyoming.....	Moffat	Drilling
McClinton Drilling Company, Route 1, Box 34C, Broomfield.....	Larimer	Drilling
McKibben Construction Company, Craig.....	Rio Blanco	Pump Unit
		Construction

OIL & GAS DRILLING & PRODUCING COMPANIES—Continued

Name & Address of Company	County	Operation
Mead Drilling Company, Rangely.....	Rio Blanco	Drilling
Miers Well Service, Box 325, Sterling.....	Logan	Drilling
	Morgan	
	Yuma	
Miracle & Fifer Drilling Company, 1225 First National Bank Building, Denver.....	Weld	Drilling
Miracle & Wooster Drilling Company, Vernal, Utah.....	Moffat	Drilling
	Routt	
Monsanto Chemical Company, 1310 Denver Club Building, Denver.....	Jackson	Producing
Moran Brothers, Inc., Oil & Gas Building, Wichita Falls, Texas.....	Baca	Drilling
	La Plata	
Mountain Fuel Supply Company, Powder Wash.....	Moffat	Producing
Mountain States Drilling Company, 622 Patterson Building, Denver.....	Mesa	Drilling
	Rio Blanco	
Murfin Drilling Company, 617 Union Building, Wichita, Kansas.....	Logan	Drilling
	Washington	
Nebraska Drillers, Inc., 844 First National Bank Building, Denver.....	Weld	Drilling
Noble Drilling Company, 321 Pan American Building, Tulsa, Oklahoma.....	Moffat	Drilling
	Rio Blanco	
O'Quinn & Murray, Inc., Box 312, Fort Morgan.....	Washington	Drilling
Oriental Refining Company, Box 118, Denver.....	Archuleta	Producing
P. M. Oil Corporation, 1825 Applewood Drive, Lakewood.....	Boulder	Drilling
Peacock Well Service, Rangely.....	Rio Blanco	Drilling
Willard Pease Drilling Company, Grand Junction.....	Mesa	Drilling
	Rio Blanco	
Pioneer Drilling, Inc., Box 2211, Casper, Wyoming.....	Mesa	Drilling
Production Completions, Inc., 914 Patterson Building, Denver.....	Washington	Drilling
Rayco Drilling Company, Farmington, New Mexico.....	La Plata	Drilling
Red Cliff Oil Company, 517 Colorado Avenue, Pueblo.....	Fremont	Producing
Regal Drilling Company, Continental Oil Building, Denver.....	Morgan	Drilling
	Washington	
San Miguel Drilling Company, Box 185, Naturita.....	San Miguel	Drilling

OIL & GAS DRILLING & PRODUCING COMPANIES—Continued

Name & Address of Company	County	Operation
Sentinel Oil Company, Box 424, Craig	Moffat	Drilling
Sierra Petroleum Company, Inc., Box 232, Russell, Kansas	Bent	Drilling
Signal Drilling & Exploration Inc., Box 614, Casper, Wyoming	Jackson Rio Blanco	Drilling
Smith Boor Drilling Company, Box 1232, Shawnee, Oklahoma	Baca	Drilling
I. M. Spangler et al, 910 Greenwood Street, Canon City	Fremont	Drilling
Stearns Drilling Company, May Day, Hesperus	Montezuma	Drilling
Steward Well Service, Box 247, Kimball, Nebraska	Boulder	Drilling
Stone Drilling Company, 1807 Charo Avenue, Farmington, New Mexico	La Plata	Drilling
Summit Drilling Company, 1516 Zuni Drive, Farmington, New Mexico	La Plata	Drilling
Texaco Inc., Meeker	Rio Blanco Routt	Producing
Tipps Drilling Company, Inc., 914 Patterson Building, Denver	Washington	Drilling
Twin Completion Company, 418 South Elm Street, Casper, Wyoming	Jackson	Producing
Uinta Oil Refining Company, Rangely	Rio Blanco	Drilling
Victor Drilling Company, 722 Patterson Building, Denver	Jackson	Drilling
Wakefield Drilling Company, 515 Union Building, Wichita, Kansas	Baca	Drilling
Well Completion, Inc., Box 1356, Denver	Gunnison	Drilling
Wells Drilling Company, Rangely	Rio Blanco	Drilling
Western Drilling Company, Hayden	Routt	Drilling
Wes-Tex Drilling Company, Box 2058, Abilene, Texas	Washington	Drilling
Wyoming Western Oil Company, Box 645, Pine Bluffs, Wyoming	Weld	Drilling

